

NR 5/10.1/1889-90  
c.2

Reports  
— State of Colorado —  
— of the —  
State Engineer  
(J. P. MAXWELL)  
— for —  
1889, 1890







FIFTH BIENNIAL REPORT

OF THE

# STATE ENGINEER

TO THE

Governor of Colorado,

FOR THE

YEARS 1889 AND 1890.



DENVER, COLORADO:  
THE COLLIER & CLEVELAND LITH. CO., PRINTERS.  
1891.

1889-1890



## LETTER OF TRANSMITTAL.

---

DENVER, COLO., Dec. 1, 1890.

*Governor:*

I have the honor to transmit herewith the report of the transactions of the Department of the State Engineer, for the two fiscal years ending November 30, 1890.

I am, sir, very respectfully,

Your obedient servant,

J. P. MAXWELL,

*State Engineer.*

*To His Excellency,*

JOB A. COOPER,

*Governor of Colorado.*



Digitized by the Internet Archive  
in 2013

## INTRODUCTION.

---

By reference to section 2 of "An act in relation to State Printing," on page 417, Sessions Laws of 1889, it will be observed that the official reports of this department are now limited to 150 pages, and the publication thereof to 500 copies.

• When it is considered that Part I of the Fourth Biennial Report from this office, made by my able predecessor, J. S. Greene, contains 428 pages, of which there is not a page of superfluous matter, that 224 of those pages are devoted exclusively to tabulated statements of ditches, reservoirs, artesian wells, etc., giving in concise form valuable and desirable information thereon; that, in the irrigation development of the State, new water districts have been formed, many additional ditches constructed, and expensive adjudications of water-rights taken place in various parts of the State; and, further, that in the construction of State bridges, roads, canals and other internal improvements provided for by the last General Assembly, new duties have devolved upon the State Engineer, requiring much additional space to make full and intelligent reports thereon, it may readily be seen that this report must be a very brief and inadequate summary of the operations of the department during the two years last past, or must transcend the limits prescribed by this act.

Of the 3,250 copies of Part I of the Fourth Biennial Report published, over 3,000 copies have been already distributed upon written and personal applications for the same, and daily calls are still made for them, both within and without the State. Having a wholesome respect for the law, I shall indulge in no extended discussions of problematical questions, but with a desire

to present fully such transactions of the office as will be of interest to the people of the State—the operations of the department will be given such amplitude as a just accountability requires.

All statements of adjudicated water-rights, ditch filings, and other statistical information embraced in the last report from this department, will be omitted in this, but such decrees as have been issued since December 1, 1888, and all filings of ditch statements made since that date, will be reported in tabulated form, as being essential to a general knowledge of the claims made upon the water supply of the various streams of the State. This information will, doubtless, govern, to a large extent, the future construction of ditches; as coupled with a knowledge of the mean discharges of the streams, reliable data is thereby furnished upon which to estimate the demands now made upon the supply.

---

#### CHAPTER I.

The duties of the office of State Engineer were assumed April 10, 1889, at a time when active preparations were being made for the irrigation season, and when the Water Commissioners would soon be called out to prepare for the distribution of the waters of the streams.

Each Commissioner having been supplied with a copy of the last report, embracing all the laws relative to his duties enacted at the time of publication thereof, it was deemed advisable to issue, in circular form, such recent enactments of the Seventh General Assembly as would be necessary to an intelligent understanding of the additional powers conferred and duties imposed, which circular follows herein:

#### TO WATER COMMISSIONERS.

GENTLEMEN:—Following will be found, for your guidance, the recent enactments of the Legislature of Colorado, affecting your duties as Water Commission-

ers. They are additional to and amendatory of the statutes concerning irrigation, contained in the State Engineer's report for 1887-88, now in your possession.

You will observe that it is made the duty of the Water Commissioner to be actively employed on the line of the streams in his water district. He should keep himself posted daily as to the flow of water in the streams, and as to what ditches are taking water, in order that report thereof may be made at any time on short notice from the Superintendent of Division.

Locks should be ordered placed on all head-gates where the owners refuse or are unable to keep them closed in accordance with instructions of Water Commissioners.

Wherever practicable, you will see that waters supplied to ditches in accordance with priority, are beneficially and economically used, or turned back into the streams for the benefit of others.

Very respectfully,

J. P. MAXWELL;  
*State Engineer.*

---

#### AN ACT

TO GIVE POLICE POWERS TO WATER COMMISSIONERS, FIX THEIR SALARIES, DEFINE THEIR DUTIES, AND PROVIDE FOR THEIR ASSISTANTS, AND TO REPEAL CERTAIN PARTS OF ACTS INCONSISTENT HEREWITH.

*Be it enacted by the General Assembly of the State of Colorado:*

SECTION 1. Water Commissioners shall, in the discharge of their duties, be invested with the powers of constables, and may arrest any person violating his orders relative to the opening or shutting down of head-gates, or the using of water for irrigation purposes, and take such offender before the nearest justice of the peace, who may, if such offender be convicted, fine him in any sum not exceeding one hundred dollars, and in default of the payment of such fine, may imprison him in the county jail not exceeding thirty days; *Provided*, That the orders of the Superintendents of Irrigation in their respective divisions, and the orders of the State Engineer, shall be held at all times superior to the orders of Water Commissioners, and shall relieve any person acting in accordance with such superior orders from the penalties herein provided; *And, provided also*, That in like manner the orders issued by the State Engineer shall be held superior to any order issued by any Superintendent of Irrigation.



SEC. 2. The Water Commissioner shall be entitled to pay at the rate of five (5) dollars per day for each day he shall actually be employed in the duties of his office, and be paid by the county or counties in which his irrigating district may lie. Each Water Commissioner shall keep a just and itemized account of the time spent by him in the duties of his office, and shall present a true copy thereof, verified by oath, to the Board of County Commissioners of the county in which his district may lie, and said Board of Commissioners shall allow the same; if said irrigation district shall extend into two or more counties, then such Water Commissioner shall present his account for his services, verified as aforesaid, to the Board of County Commissioners into which his district extends, and each Board of County Commissioners shall pay its *pro rata* share thereof.

SEC. 3. The Water Commissioner is hereby given power, whenever he shall deem it necessary, to employ a suitable assistant or assistants to aid him in the discharge of his duties; such assistant or assistants shall take the same oath as Water Commissioners, and shall obey his instructions, and shall be entitled to pay at the rate of two (2) dollars and fifty (50) cents per day for every day they are so employed, to be paid by the County Commissioners upon the certificates of the Water Commissioners.

SEC. 4. Each Water Commissioner shall keep an itemized account of the time of each assistant by him employed, and shall certify the same to the Board of County Commissioners, who shall pay such assistant or assistants in the same manner as provided for payment of Water Commissioners in section two of this act.

SEC. 5. That section one of an act entitled "An act to amend an act entitled an act to regulate the use of water for irrigation, and providing for settling the priority of rights thereto, and for payment of the expenses thereof, and for payment of all costs and expenses incident to said regulation of use," approved February 19, 1879; approved April 9, 1885; and also section forty-one of an act entitled "An act to regulate the use of water for irrigation, and providing for settling the priority of rights thereto, and for payment of expenses thereof, and for payment of all costs and expenses incident to said regulation of use," approved February 19, 1879, and all other acts inconsistent, are hereby repealed.

SEC. 6. It is hereby made the duty of the Water Commissioner, after being called upon to distribute water, to devote his entire time to the discharge of his duties, when such duties are required, so long as the necessities of irrigation in his district shall require; and it is made his duty to be actively employed on the line of the stream or streams in his water district, supervising the putting in of head-gates, waste-gates, keeping the stream clear of unnecessary dams or other obstructions, and such other duty as pertain to a guard of the public



streams in his water district; and for willful neglect of his duty, he shall be liable to fifty dollars' fine, with costs of suit.

SEC. 7. It is the sense of this General Assembly that an emergency exists; therefore, this act shall be in force from and after its passage.

Approved March 25, 1889.

---

### AN ACT

TO PROVIDE FOR ERECTING HEAD-GATES, WASTE-GATES, LOCKS, FASTENINGS, AND PAYING THE EXPENSES THEREOF.

*Be in enacted by the General Assembly of the State of Colorado:*

SECTION 1. All persons, associations or corporations, who have heretofore, or who may hereafter divert water for purposes of irrigation from any of the public streams of the State, shall erect and maintain head-gates and waste-gates in connection therewith, and in case of failure or neglect, or refusal to do so, after five days' notice has been given by the Water Commissioner or State Engineer, then said head-gates shall be constructed by the Water Commissioner of the district within which said ditch, canal or conduit may be located, and if, upon demand, the owner or owners of said ditch, canal or conduit shall neglect or refuse to pay the expenses thereof, then the said Water Commissioner shall take such proceedings to recover the same as is now provided for by sections 1730, 1731 and 1732 of the General Statutes of 1883, in the case of failure to build and maintain bridges.

SEC. 2. All persons, associations or corporations shall put and keep suitable locks and fastenings on their head-gates, where water is conducted from the public streams or heads of supply, and if said persons, associations or corporations refuse or neglect to provide locks and suitable fastenings for said head-gates, after five days' notice by the Water Commissioner of the district, or by the State Engineer, it is made the duty of the Water Commissioner of the water district and its Superintendent to provide suitable locks and fastenings, and if the owner or owners of said ditch, canal or conduit shall neglect or refuse to pay the expenses thereof, the Water Commissioner shall take such proceedings to recover the same as are provided in section one of this act; the keys of said locks to be under the control and in possession of the Water Commissioner of the district during the season of irrigation or domestic distribution of water.

SEC. 3. In the opinion of the General Assembly, an emergency exists; therefore, this act shall take effect and be in force from and after its passage.

Approved April 17, 1889.

## AN ACT

IMPOSING A PENALTY FOR THE BRIBING OF PERSONS IN CHARGE  
OF THE DISTRIBUTION OF WATER.

*Be it enacted by the General Assembly of the State of Colorado:*

SECTION 1. Any Water Commissioner, or any Deputy Water Commissioner, Assistant, Water Master, Superintendent, Ditch-rider, or other person in charge of the divisions or distributions of water, whether from the public streams or from any ditch or canal, who shall take or receive any money, promises or favors, or anything of value, intended to influence him dishonestly to favor, or cause water to accrue or run to any person or persons' advantage, benefit or gain, detrimental to the rights of others, shall be deemed guilty of a misdemeanor and shall be fined in any sum not less than fifty (50) dollars nor more than three hundred (300) dollars. Any person giving or offering any such money, promises or favors, or any other thing of value, to any of the above named persons, with intent as aforesaid, shall likewise be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine in any sum not less than fifty (50) dollars nor more than three hundred (300) dollars; and any fines so collected shall be paid into the school funds of the county wherein such fines are collected.

SEC. 2. It is the sense of this General Assembly that an emergency exists; therefore, this act shall be in force from and after its passage.

Approved April 19, 1889.

---

Water commissioners were appointed for many districts where no adjudications had taken place, and where, consequently, no data were available for the equitable distribution of the water. Letters were received from such officers, asking for instructions in emergencies of this kind, and setting forth that conflicts had arisen wherein there was no basis for the settlement of the respective rights of the owners of ditches, there being no decrees. In some of these districts there was also reported to be a general apathy in the matter of proving up their rights, and especially if expense was to be incurred in the measurement of ditches for the better information of the court. Believing that Water Commissioners could exercise the duties of their offices legally, only where the courts had determined the

respective rights of ditches and issued decrees therein, the following circular letter was sent to all Commissioners who were not armed with such decrees:

STATE ENGINEER'S OFFICE, }  
DENVER, COLO., 1889. }

DEAR SIR:—The following is a copy, in part, of paragraph 1784 of the General Statutes of Colorado for 1883.

“No claim of priority of any person, association or corporation, on account of any ditch, canal or reservoir, as to which he or she or they shall have failed or refused to offer evidence under any adjudication herein provided for, or heretofore provided for by said act, the title of which is recited in section four hereof, shall be regarded by any Water Commissioner in distributing water in times of scarcity thereof, until such time as . . . . . a decree adjudging such priority to such ditch, canal or reservoir has been entered, and certificate, such as mentioned in section four hereof, shall have been issued to claimant and presented to the Water Commissioner.” (Section 22, pages 154-55, Acts 1881.)

It will be observed from the above paragraph that the warrant of authority to the Water Commissioner to distribute water, is the certificate of the Clerk of the District Court, setting forth the date of priority and the quantity decreed; hence in water districts where there are no decrees, there will be no occasion for a Water Commissioner, and in districts where adjudications have been had on a portion of the ditches, such portion only will be recognized in the allotment of water in times of scarcity.

The tangled web of difficulties that has arisen in the Northern and older irrigating districts of the State, resulting from decrees based upon erroneous statements as to size and capacities of ditches, as well also as to dates of construction and priority, should constitute a valuable lesson to the newer districts of the South and West.

It is to the interest of every ditch owner to secure an adjudication of the water-rights connected with his ditch at the earliest practicable moment, in order to get the benefit of the legal distribution of the water, and it is vitally to his interest to see to it that the decree to

every other ditch in his district is based upon facts as to capacity and date of priority.

Where a ditch has received a decree for water in excess of its carrying capacity, it is a very natural thing for the owner to enlarge in cleaning out his ditch until it will carry the water decreed, thereby eventually securing a quantity of water, dating back to the original construction to which the ditch was not justly entitled, but still in accordance with the decree. This, necessarily, injuriously affects post-dated ditches.

While water would not be allowed to a ditch in accordance with such increased capacity, if satisfactory proof was furnished as to its actual capacity at the time of the decree, yet it must be remembered that after the lapse of several years, such proof will, in a majority of cases, have passed beyond the reach of the parties interested, as can be instanced repeatedly in the experience of the older districts, which have passed through this ordeal.

To avoid these shoals upon which the older irrigation districts have floundered, it is earnestly recommended that great care be exercised in placing before the courts accurate data upon which to base the decrees for water to the respective ditches. In this matter every ditch owner of the district is interested.

Claims are often made that where no decrees have been issued the water could be distributed from information furnished by the statements filed in the State Engineer's office, but aside from the plain provisions of the law heretofore quoted, the statements so furnished are, many of them, so deficient in data as to be entirely useless for such a purpose; nor are they necessarily evidence of the existence of the ditches on the ground, many of them being filed as evidence of intention and preliminary to construction, and may never have been followed by actual construction, or may have been built with increased or decreased capacity.

It is hoped that County Commissioners, and other officials, in the interest of their respective counties, will afford every possible facility tending toward the proper adjudication of water-rights, and will encourage and assist Water Commissioners in building up a system of water distribution that will give security and perma-

nence to water-rights, and consequent freedom from the serious complications that have resulted from the loose methods heretofore prevailing.

Very respectfully,

J. P. MAXWELL,  
*State Engineer.*

---

The early summer of 1889 found an unusual deficiency in the water supply of the South Platte and Arkansas divisions, and had it not been for timely rains severe losses in crops would have been inevitable. The position of Water Commissioner is no sinecure at such times, and his difficulties were augmented by a failure on the part of many ditch owners to provide suitable head-gates for the regulation of the water supply to their ditches, and rating flumes for its proper measurement.

The absence of head-gates was principally notable in the smaller ditches, but rating flumes were wanting in all classes. The Water Commissioners were requested to furnish this office with a list of the names of the ditches in which no rating flumes had been constructed, or in which they were out of repair, also the names and addresses of the managers of such ditches, whereupon notices were sent to each, accompanied by plans and instructions for the construction. This resulted in the building of quite a number, but many are still wanting. While the law provides for the construction of flumes, there is no penalty affixed, hence enforcement is impracticable.

The demands for ratings on new flumes, re-ratings on old ones, and the gaugings of the streams have kept one assistant in the field in the South Platte division continuously during the irrigating season.

One hundred and twenty-five ditches have been rated, at the request of Water Commissioners, for their better information in the distribution of waters.



**COUNTY BOUNDARIES.**

On the twelfth day of September, 1889, the County Commissioners of Garfield county petitioned the State Engineer to survey and definitely establish the boundary line between Garfield county and the counties of Pitkin and Mesa, in accordance with the provisions of an act of the General Assembly of the State of Colorado, approved April 4, 1887.

It being impracticable to give personal attention to this work, Frank P. Monroe, a competent engineer, of Glenwood Springs, was specially deputized for that purpose, and after due notice to the County Surveyors of the interested counties to appear and assist in the survey, began work in the field on the fourteenth day of October, 1889. Following is an extract from the deputy's report, showing his method of determining and locating the south-east corner of Garfield county—this being the initiatory point in securing the boundary line.

**EXTRACT.**

The south-east corner of Garfield county I found to be on the parallel of latitude  $39^{\circ}, 22', 10.5''$  north, and 31,929.8 feet west of the 107th meridian, west longitude.

The last official point on the 107th meridian, west longitude, I found to be located near the town of Crested Butte, as described in the certified copy of official notes of said meridian point. I then extended the 107th meridian, west longitude, due north, across the Roaring Fork river.

The location of the  $39^{\circ}, 22', 10.5''$  parallel of latitude north, was obtained by a system of triangulations from Sopris Peak, the latitude of which is definitely and accurately given in the notes of Hayden's Topographical Survey of the State of Colorado.

The parallel of latitude  $39^{\circ}, 22', 10.5''$  north, was found to be 38,204.706 feet due north from the Triangulation Station on Sopris Peak, whereby the south-east

corner of Garfield county was located and established by a cedar post  $4\frac{1}{4}$  inches square, and 5 feet long, set in the ground 2 feet, with a mound of earth, marked "Garfield" on the north-west, and "Pitkin" on the south-west side.

At this point I obtained a true west course, and continued the same by a straight tangent line, with proper correction offsets.

The boundary line is shown to be defined by plain and substantial mounds and marks, at each and every mile, references being made to natural objects.

The survey was completed on the nineteenth day of June, 1890.

Field notes and maps of the survey were filed in this office September 15, 1890, and certified copies duly furnished the Boards of County Commissioners of the three counties interested.

---

### RESERVOIRS.

Section 2 of an act of the Seventh General Assembly, relating to the State Engineer, provides that he shall collect "all necessary data regarding the location, size, cost and capacity of dams and reservoirs hereafter to be constructed, and like data regarding the feasibility and economical constructions of reservoirs on eligible sites, of which he may obtain information and the useful purposes to which the water from the same may be put."

Pursuant to this end circulars were prepared and sent out to Water Commissioners and others, asking information on the points therein contained.

Such reports as were received have been tabulated and will be found in the statements of the respective districts. Much of the information desired is wanting in the circulars returned, and many Commissioners have not responded; others had no information to give.

There are a total of 333 filings for reservoirs in this office, and 244 of them made within the last two years.

From the estimated capacities of these, and from the reports of eligible sites, there can be little question but the surplus waters of our streams will be fully conserved, at no distant day, and further, that the opportunities for storage are abundant throughout the State.

The storage of the storm waters of the plains, is a matter that has received marked attention during the past year. A very notable enterprise of this kind may well receive a passing notice here.

Some 35 miles south of Denver, on Cherry creek, the Denver Water Storage Company have constructed a dam across the stream, for the purpose of impounding the storm and surplus waters of Cherry creek.

The dam is a massive stone structure of mixed masonry and dry rubble, and has the form longitudinally of a well spread V. Its greatest height is 65 feet, and crest length, 586 feet. The inner wall is of random rubble masonry, is 8 feet thick at the base, and has a batter of 1 in 10. The outer wall is block, coursed rubble masonry, has a slope of 1 to 1, and is stepped. The interior is filled with stones of all sizes, promiscuously but compactly placed.

The dam presents an imposing appearance, and has a large factor of safety, so far as gravity is concerned.

The catchment basin is reported to have an area of about 125 square miles, and the reservoir a capacity of 229,000,000 cubic feet.

This enterprise will, undoubtedly, result in the reclamation of several thousand acres of otherwise arid lands.

Several thousand acres more have already been reclaimed by similar enterprises on the Bijou, east of Denver.

From the reports of Water Commissioners and from information obtained through other sources, it is esti-



mated that during the season of 1890 there were irrigated from stored waters in Division No. 1, South Platte, about 100,000 acres; 10,000 acres of this amount being reported from District No. 3, on the Cache la Poudre, and 12,000 acres from District No. 4, on the Big Thompson, as estimated by the respective Water Commissioners.

The stored waters being used in connection with that running in ditches, renders it impracticable to determine accurately the acreage irrigated therefrom, but the figures are given as close approximations.

Colorado is, evidently, now entering upon an era of reservoir construction, the necessity for which has become apparent wherever there is a deficient water supply during the irrigating season, and as there is an element of danger connected with such improvements, all possible safeguards should be provided against such disasters as have occurred in other sections of the country within the past few years.

#### GAUGING STATIONS.

No little annoyance and uncertainty has resulted from the temporary and changeable character of our gauging stations. Excepting as to Station No. 1, on the Cache la Poudre, the sites have been selected principally with reference to convenience for observers, taking the most uniform banks and beds in the vicinity of some house where the occupant could be secured at little cost to attend the readings. Each flood storm will change the cross-section, scouring the bed or filling in with sand and eroding the banks, thus materially modifying the area and necessitating a new profile. Much of the time of an assistant is occupied in this work.

*Station No. 1*, above referred to, was originally constructed, under the supervision of Mr. Nettleton, at considerable cost to the people of that district, and for

a time gave very satisfactory results. The floor was of plank, resting on piling, and the walls timbered and planked. During the administration of Mr. Greene, however, the walls partially gave way, and were replaced by masonry walls, and the floor became so bulged and rotted as to necessitate removal entirely, after which changes in the bed occurred and the results were not so reliable. There is a clock-work register, at this station, requiring attention but once a week, under ordinary circumstances, which furnishes an accurate record of the rise and fall in the stream. The expense of an observer at this station has, until this year, been borne by the General Government, but since their abandonment, has been paid by this Department.

*Stations Nos. 8 and 5, on Big Thompson and St. Vrain Creeks*, have been maintained at their old sites, but are subject to the general criticisms heretofore made. The plain rods used require observations three times a day.

*Station No. 7, on Boulder Creek*, was located some four miles above Boulder in the cañon, but the observer moving away, a new site was selected some two miles nearer town; rough, dry walls were built, a small building erected, and the plain rod replaced by a clock-work register. This has given fair satisfaction, and cost, including pipe, building, etc., \$69.30.

*Station No. 4, on Clear Creek*, is one of the most important in the South Platte Division, and affords the least reliable information.

Repeated changes have been made in the location of the site, but without materially improving the result.

The sediment, sand and silt carried in the water are continually modifying the cross-section, so that the profile of one day has little value the next.

Two gaugings made in August, with practically the same readings on the rod, gave a discharge in one case

of 212.25 cubic feet per second, and in the other, 143.70 cubic feet per second, a difference of 68.55 cubic feet per second.

A gauging made May 23, with the rod at 1.60 feet gave a discharge of 472.33 cubic feet per second. Another made June 6, following, with a reading on the rod of 1.70 feet, gave a discharge of 423.88 cubic feet per second, 0.10 greater height on the rod, in the latter case giving 48.45 cubic feet less discharge.

The plain rod is used, requiring three readings a day, and while an observer has been employed for the station, little benefit has accrued to the department, as it has been impossible to furnish the Water Commissioner reliable data for the distribution of water, and it is impracticable to make a diagram of the discharge.

A permanent cross-section should be established on this stream, with masonry walls and flagging floor, also, a weekly register attached, otherwise the observations had as well be discontinued.

*Bear Creek Station No. 6.*—This station has been changed to Morrison, to suit the convenience of an observer, the section being equally as good at the latter place.

*South Platte Station No. 3.*—This station has also followed the fortunes of various observers. The Deansbury Station being discontinued for want of an observer. It was located some two miles below, afterwards four miles below, and thence transferred back to Deansbury, as parties could be found to attend the observations. It is now located at the latter place, and a plain rod used for reading the water heights.

*Uncompahgre Gauging Station No. 1.*—At the urgent request of the Superintendent of Division No. 5, representing the ditch owners in district No. 41, a gauging station was established in July, 1890, on the Uncompahgre river, about eight miles above Montrose and

near the head of the Uncompahgre canal. Deputy State Engineer J. S. Titcomb was sent over for that purpose, and was assisted by E. B. Sawyer, Division Superintendent. William Sigafus acted as observer to October 15, when he was ordered to discontinue for the season.

The observers for the various gauging stations are paid from the State Engineer's Assistant Fund, at the rate of \$5 and \$10 per month, the price being regulated by the distance traveled and labor connected therewith. Where the rod is used, and three observations are required each day, it cannot be expected that close attention and accuracy will be attained for the small pittance allowed, hence reports from such stations have to be taken with some degree of allowance.

The principal object to be attained in the maintenance of these stations should be the furnishing of accurate information as to the daily discharge of each stream, and the rapid transmission of any changes to the Water Commissioner, to the end that his distribution to the ditches may be regulated thereby. With the daily, and sometimes hourly, fluctuations of our streams during the irrigating season, this knowledge is essential to the proper conservation of the waters. The Water Commissioner, through some station central to the district, should have close connection with the observer by telephone or other rapid transit, and in this manner anticipate the coming changes and regulate his head-gates accordingly.

With permanent and reliable gauging stations, and proper facilities for transmitting the record on occasions of rapid rises in the streams, many ditches, closed by reason of scarcity, could be temporarily supplied with water and relief afforded to suffering crops, where now the opportunity is lost on account of delayed information.

Such improvements will require but a moderate expenditure of money, and the benefits derived therefrom will amply repay the outlay.



Graphical presentation of the mean daily discharges of all the streams having gauging stations, for the years 1889 and 1890, excepting Clear creek, are herewith transmitted. Also, tabulated statements showing their mean daily discharge, and their mean discharge during the irrigating season.

The gaugings on the Cache la Poudre, Arkansas and Rio Grande rivers were taken for every month in the year, and complete tables are given, from which the annual discharge can be determined. On the other streams there are no facilities for correct gaugings during the winter months, when the ice forms on the margins and elsewhere, obstructing the flow of water and continuously changing the cross-sections; hence observers were employed only during the irrigating season, or from April to November. The gaugings of the South Platte, at Denver, are also given, as showing the daily flow into District No. 2. The table for Bear creek in 1889 is not complete, owing to the washing out of the rod by a flood, and the abandonment of the station by the observer, without notice to this office.

Much desirable information could be obtained if observations were taken on all the streams throughout the year, as thereby the amount of water available for storage on each stream could be ascertained; with suitable stations this could be done. Plans for the different stations have been prepared by the office, and estimates of the cost of construction in each case.

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME, OF THE CACHE LA POUDRE RIVER, AT GAUGING STATION No. 1.

1889.

Day	Jan.	Feb.	Mar'h	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Day
1	71	73	125	48	283	1960	844	455	73	71	92	69	1
2	130	75	104	48	237	1608	844	435	73	73	71	78	2
3	130	86	86	52	214	1502	779	403	73	69	75	67	3
4	89	101	78	57	237	1323	722	306	69	69	86	55	4
5	111	98	73	58	282	1282	633	249	67	71	69	56	5
6	115	92	58	65	348	1559	579	209	67	71	71	60	6
7	98	92	55	71	324	1583	680	159	67	67	73	60	7
8	83	122	55	78	237	1486	757	146	71	61	92	65	8
9	108	133	52	75	237	1502	757	183	65	56	111	65	9
10	98	130	52	68	300	1388	736	231	59	55	122	60	10
11	134	108	40	59	254	1298	653	237	58	56	122	48	11
12	173	111	41	59	254	1258	599	220	56	60	98	73	12
13	193	101	41	65	397	1298	546	188	58	69	85	73	13
14	193	75	41	70	736	1307	513	146	60	68	86	78	14
15	183	69	41	68	903	1559	461	137	69	69	101	89	15
16	173	71	42	73	947	1608	435	137	73	65	98	86	16
17	164	83	44	88	888	1486	416	133	73	65	107	33	17
18	168	108	47	129	851	1518	397	154	71	67	107	89	18
19	243	75	44	122	807	1534	385	225	73	69	111	73	19
20	306	89	43	101	736	1486	366	193	73	75	101	67	20
21	324	101	43	101	822	1315	354	178	73	73	101	61	21
22	342	101	47	101	1055	1307	294	150	75	71	92	55	22
23	255	134	48	101	1062	1242	378	146	73	69	98	58	23
24	164	150	46	107	1086	1178	360	141	73	69	89	73	24
25	146	198	46	146	1147	1062	336	141	70	69	67	61	25
26	118	198	43	198	1380	1016	312	111	68	71	58	71	26
27	89	173	43	237	1364	948	265	98	71	73	45	81	27
28	118	142	43	288	1642	874	271	86	71	75	56	67	28
29	108	. . .	44	342	1486	837	306	81	69	86	65	43	29
30	98	. . .	47	312	1477	837	416	67	67	85	73	41	30
31	73	. . .	55	. . .	1886	. . .	443	71	. . .	92	. . .	39	31
Mean	154.77	110.32	53.77	112.57	763.84	1338.70	504.25	187.61	68.60	69.64	87.40	64.32	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME, OF THE CACHE LA POUDRE RIVER, AT GAUGING STATION No. 1.

1890.

Day	Jan.	Feb.	Mar'h	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Day
1	45	104	89	73	435	1736	970	360	159	57	89	67	1
2	65	133	104	71	494	1804	963	342	173	55	83	60	2
3	69	137	101	69	552	1625	957	324	183	55	81	61	3
4	78	133	92	71	666	1510	896	294	159	58	78	55	4
5	101	104	78	73	764	1339	852	255	150	60	69	52	5
6	101	78	71	92	722	1225	822	222	138	73	67	67	6
7	83	75	67	107	633	1139	764	183	130	73	71	46	7
8	75	75	65	101	666	1178	736	173	130	73	73	52	8
9	59	89	71	98	729	1193	857	198	122	73	71	48	9
10	78	107	58	89	743	1217	770	336	111	73	68	50	10
11	86	104	49	98	800	1201	712	403	108	67	58	107	11
12	98	98	47	107	836	1186	601	348	101	89	55	80	12
13	104	86	52	122	800	1242	590	354	98	118	49	71	13
14	101	78	52	137	729	1225	546	403	89	118	52	65	14
15	101	73	60	137	736	1282	613	397	85	118	44	58	15
16	101	85	85	133	807	1315	533	385	85	101	39	60	16
17	78	75	104	133	888	1331	481	385	85	80	41	63	17
18	78	73	101	141	1078	1339	515	306	81	81	42	67	18
19	81	69	101	178	1109	1298	559	383	81	81	43	53	19
20	78	49	101	237	1186	1266	559	366	86	83	52	55	20
21	75	43	101	243	1388	1266	1000	348	89	83	55	44	21
22	78	52	107	271	1592	1258	1023	294	92	71	61	67	22
23	83	49	125	300	1461	1282	613	271	78	73	63	67	23
24	92	37	114	336	1405	1225	502	282	73	78	69	58	24
25	73	49	104	455	1469	1201	448	251	73	78	61	55	25
26	73	44	101	474	1583	1163	403	238	73	78	65	60	26
27	78	52	98	481	1651	1155	403	234	73	89	73	71	27
28	83	69	98	435	1710	1139	360	183	73	89	55	83	28
29	89	. . .	85	372	1650	1062	348	178	65	89	53	101	29
30	87	. .	78	366	1510	1016	336	159	58	89	63	86	30
31	78	. . .	78	. . .	1575	. . . .	366	150	. . .	92	. . .	101	31
Mean	82.03	78.57	85.06	200.00	1044.09	1313.93	648.32	290.48	103.36	80.42	61.43	65.48	Mean

## TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE SOUTH PLATTE RIVER, AT GAUGING STATION  
No. 3.

1889.

Day	April	May	June	July	August	Sept.	October	Day
1	.....	249	589	245	105	158	110	1
2	.....	216	590	245	146	158	110	2
3	.....	217	595	230	130	110	110	3
4	.....	230	610	230	140	110	130	4
5	.....	183	485	236	105	95	130	5
6	.....	185	450	230	102	92	165	6
7	.....	198	430	220	110	95	168	7
8	.....	210	420	230	121	110	160	8
9	.....	220	389	318	292	114	110	9
10	.....	310	438	416	213	112	115	10
11	.....	318	480	643	462	112	120	11
12	.....	323	485	517	445	112	130	12
13	.....	300	490	536	517	112	120	13
14	.....	695	480	445	480	112	110	14
15	.....	728	510	606	283	230	110	15
16	.....	782	430	517	254	230	100	16
17	.....	770	380	426	130	200	100	17
18	.....	740	350	445	213	160	126	18
19	.....	710	330	452	254	112	120	19
20	.....	703	350	408	140	115	115	20
21	.....	788	400	354	110	118	100	21
22	183	785	530	300	213	119	130	22
23	185	530	750	271	181	112	116	23
24	193	580	510	283	136	110	117	24
25	170	510	430	245	102	120	119	25
26	172	493	420	220	230	210	110	26
27	140	500	430	189	146	120	100	27
28	167	582	434	179	158	120	100	28
29	170	580	318	151	158	105	100	29
30	168	585	300	130	300	100	100	30
31	.....	590	.....	121	150	.....	116	31
Mean	172.00	477.74	460.10	323.80	210.51	129.40	180.30	Mean



TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE SOUTH PLATTE RIVER, AT GAUGING STATION  
No. 3.

1890.

Day	April	May	June	July	August	Sept.	October	Day
1	. . . .	323	480	400	360	300	163	1
2	. . . .	396	516	426	480	210	163	2
3	. . . .	390	510	470	568	280	163	3
4	. . . .	428	520	446	581	265	154	4
5	. . . .	420	480	452	556	208	164	5
6	. . . .	408	420	490	548	190	185	6
7	. . . .	364	370	387	529	175	215	7
8	. . . .	350	356	420	516	205	209	8
9	. . . .	352	312	426	548	210	209	9
10	. . . .	350	293	716	638	202	213	10
11	. . . .	355	270	696	620	190	236	11
12	. . . .	360	280	588	581	192	260	12
13	. . . .	340	312	875	626	183	240	13
14	. . . .	340	387	480	626	165	202	14
15	. . . .	330	356	470	652	142	185	15
16	. . . .	325	370	385	652	136	170	16
17	. . . .	340	400	410	542	131	146	17
18	. . . .	370	351	428	638	128	174	18
19	. . . .	330	332	500	626	131	170	19
20	. . . .	350	380	780	594	142	185	20
21	. . . .	390	370	710	581	156	178	21
22	. . . .	480	394	680	581	219	163	22
23	. . . .	610	412	620	568	230	154	23
24	. . . .	410	420	630	529	209	146	24
25	. . . .	420	446	550	581	200	146	25
26	. . . .	400	510	530	620	199	135	26
27	. . . .	400	536	430	606	210	126	27
28	. . . .	430	452	425	484	200	120	28
29	. . . .	440	452	430	446	185	114	29
30	. . . .	450	387	410	433	176	112	30
31	. . . .	470	. . . .	450	529	. . . .	117	31
Mean	. . . .	391.00	403.13	519.67	561.90	196.30	171.51	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME OF THE SOUTH PLATTE RIVER, AT GAUGING STATION No. 3B (FOOT OF TWENTY-FIRST STREET, DENVER).

1889

Day	May	June	July	August	Sept.	October	Day
1	147	299	82	141	65	107	1
2	155	299	72	135	65	94	2
3	151	290	80	121	65	75	3
4	155	208	82	114	66	102	4
5	143	118	101	96	70	102	5
6	92	104	104	75	65	75	6
7	95	118	141	65	65	110	7
8	100	118	151	65	65	70	8
9	139	189	610	92	65	75	9
10	175	355	633	480	67	75	10
11	185	355	562	417	66	75	11
12	252	299	455	362	65	75	12
13	263	128	299	196	66	28	13
14	275	181	189	156	72	60	14
15	355	345	101	172	62	65	15
16	633	299	82	150	70	85	16
17	590	269	252	150	75	70	17
18	645	104	93	141	80	65	18
19	645	100	144	144	76	75	19
20	562	93	101	156	77	60	20
21	527	82	87	107	80	65	21
22	527	96	93	81	80	65	22
23	527	134	1,315	75	137	60	23
24	527	299	510	75	130	54	24
25	527	252	383	75	102	54	25
26	527	104	391	83	109	68	26
27	527	118	370	86	95	70	27
28	362	107	417	73	75	70	28
29	259	104	334	70	85	65	29
30	305	93	160	70	85	75	30
31	345	. . . .	144	70	. . .	85	31
Mean	345.71	188.66	275.42	138.48	64.83	73.35	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME OF THE SOUTH PLATTE RIVER, AT GAUGING STATION No. 3B (FOOT OF TWENTY-FIRST STREET, DENVER).

1890

Day	May	June	July	August	Sept.	October	Day
1	.....	.....	170	111	154	147	1
2	.....	.....	232	376	111	87	2
3	.....	.....	243	390	87	135	3
4	.....	.....	232	403	147	117	4
5	.....	.....	243	390	87	146	5
6	.....	.....	243	307	87	197	6
7	.....	.....	277	279	105	210	7
8	.....	.....	213	255	98	197	8
9	.....	.....	116	258	118	159	9
10	.....	290	186	235	147	236	10
11	.....	.....	277	320	160	197	11
12	.....	.....	348	300	125	223	12
13	.....	.....	528	680	118	250	13
14	.....	155	232	459	125	279	14
15	.....	194	170	445	125	236	15
16	.....	234	170	418	117	236	16
17	.....	245	204	376	125	223	17
18	.....	232	456	376	111	223	18
19	.....	215	528	292	125	279	19
20	.....	126	860	264	98	250	20
21	.....	163	780	250	45	334	21
22	.....	243	1,202	250	76	223	22
23	.....	232	528	388	76	223	23
24	.....	186	582	223	76	223	24
25	.....	123	290	560	87	264	25
26	.....	111	254	431	67	146	26
27	.....	265	292	172	99	135	27
28	.....	194	235	135	98	210	28
29	.....	142	105	111	115	140	29
30	.....	155	82	160	125	135	30
31	.....	.....	82	160	..	146	31
Mean	.....	194.72	327.74	315.25	107.80	291.93	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE ST. VRAIN CREEK, AT GAUGING STATION No. 5.

1889.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. . . .	451	295	90	64	33	. . . .	1
2	. . . .	393	301	90	64	33	. . . .	2
3	. . . .	372	280	108	64	26	. . . .	3
4	. . . .	329	258	99	52	30	. . . .	4
5	. . . .	335	236	105	52	30	. . . .	5
6	. . . .	365	230	99	52	28	. . . .	6
7	. . . .	408	236	95	52	33	. . . .	7
8	. . . .	414	293	99	42	26	. . . .	8
9	. . . .	329	293	130	42	26	. . . .	9
10	. . . .	316	236	161	42	26	. . . .	10
11	. . . .	295	215	175	42	26	. . . .	11
12	. . . .	308	215	142	42	26	. . . .	12
13	. . . .	343	194	120	33	26	. . . .	13
14	. . . .	393	215	109	47	33	. . . .	14
15	. . . .	500	209	115	52	42	. . . .	15
16	. . . .	415	209	115	47	65	. . . .	16
17	. . . .	393	200	120	42	67	. . . .	17
18	. . . .	408	175	115	42	45	. . . .	18
19	. . . .	423	180	120	42	42	. . . .	19
20	390	423	161	105	33	42	. . . .	20
21	390	372	148	105	33	42	. . . .	21
22	390	365	148	90	33	33	. . . .	22
23	390	365	175	81	33	33	. . . .	23
24	493	344	167	77	47	33	. . . .	24
25	493	329	167	77	42	26	. . . .	25
26	527	329	130	77	33	26	. . . .	26
27	520	308	114	77	33	26	. . . .	27
28	548	301	120	64	33	26	. . . .	28
29	485	295	105	73	33	59	. . . .	29
30	472	286	105	77	33	42	. . . .	30
31	493	. . . .	90	64	. . . .	52	. . . .	31
Mean	465.07	370.56	197.10	102.40	44.03	38.90	. . . .	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE ST. VRAIN CREEK, AT GAUGING STATION No. 5.

1890.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. . . .	555	360	230	137	37	37	1
2	. . . .	675	380	190	158	37	37	2
3	. . . .	590	327	167	130	48	37	3
4	. . . .	590	291	146	111	37	33	4
5	. . . .	448	350	167	111	37	33	5
6	. . . .	343	380	137	85	43	33	6
7	. . . .	291	327	111	79	37	33	7
8	. . . .	244	410	85	85	37	33	8
9	. . . .	343	343	120	63	37	29	9
10	. . . .	380	360	190	48	37	29	10
11	. . . .	327	327	190	63	70	27	11
12	. . . .	433	275	146	50	63	20	12
13	. . . .	427	230	190	58	63	22	13
14	. . . .	257	244	252	48	57	29	14
15	29	360	244	252	48	48	18	15
16	193	380	230	230	48	48	. . . .	16
17	111	433	215	215	48	48	. . . .	17
18	111	395	215	167	48	48	. . . .	18
19	360	555	275	203	39	48	. . . .	19
20	244	501	306	337	63	48	. . . .	20
21	327	570	275	257	63	63	. . . .	21
22	395	410	327	257	48	63	. . . .	22
23	517	380	411	230	48	48	. . . .	23
24	448	485	343	190	48	43	. . . .	24
25	510	432	230	177	52	37	. . . .	25
26	433	540	203	137	48	37	. . . .	26
27	462	555	203	137	37	48	. . . .	27
28	570	410	291	158	37	45	. . . .	28
29	570	380	177	102	48	37	. . . .	29
30	590	395	215	93	40	37	. . . .	30
31	517	. . . .	291	93	. . . .	37	. . . .	31
Mean	375.70	436.13	292.42	179.22	66.20	45.26	30.00	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF BEAR CREEK, AT GAUGING STATION No. 6.

1889.

Day	May	June	July	August	Sept.	Oct.	Nov.	Day
1	. . . .	137	47	36	. . . .	. . . .	. . . .	1
2	. . . .	130	41	68	. . . .	. . . .	. . . .	2
3	18	130	42	76	. . . .	. . . .	. . . .	3
4	26	125	35	65	. . . .	. . . .	. . . .	4
5	29	125	32	55	. . . .	. . . .	. . . .	5
6	27	119	28	69	. . . .	. . . .	. . . .	6
7	18	114	37	68	. . . .	. . . .	. . . .	7
8	21	111	72	53	. . . .	. . . .	. . . .	8
9	21		64	49	. . . .	. . . .	. . . .	9
10	21	Gauge rod washed out by flood	50	51	. . . .	. . . .	. . . .	10
11	21		55	. . . .	. . . .	. . . .	. . . .	11
12	30		46	Gauge rod washed out by flood—Observer failed to notify the Department	. . . .	. . . .	. . . .	12
13	47		64		. . . .	. . . .	. . . .	13
14	100		59		. . . .	. . . .	. . . .	14
15	127		59		. . . .	. . . .	. . . .	15
16	154		49		. . . .	. . . .	. . . .	16
17	160		61		. . . .	. . . .	. . . .	17
18	149		54		. . . .	. . . .	. . . .	18
19	149		43		. . . .	. . . .	. . . .	19
20	195	57	47		. . . .	. . . .	. . . .	20
21	149	62	33		. . . .	. . . .	. . . .	21
22	163	62	55		. . . .	. . . .	. . . .	22
23	149	55	55		. . . .	. . . .	. . . .	23
24	149	54	39		. . . .	. . . .	. . . .	24
25	149	69	48		. . . .	. . . .	. . . .	25
26	149	54	48		. . . .	. . . .	. . . .	26
27	149	53	53		. . . .	. . . .	. . . .	27
28	149	53	55		. . . .	. . . .	. . . .	28
29	149	55	68		. . . .	. . . .	. . . .	29
30	137	53	49		. . . .	. . . .	. . . .	30
31	143	. . . .	40		. . . .	. . . .	. . . .	31
Mean	101.45	85.16	49.30	58.00	. . . .	. . . .	. . . .	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF BEAR CREEK, AT GAUGING STATION No. 6.

1890.

Day	May	June	July	August	Sept.	Oct.	Nov.	Day
1	....	60	33	21	21	21	19	1
2	....	57	33	21	25	21	17	2
3	....	60	33	21	26	21	16	3
4	....	57	33	21	26	21	17	4
5	....	53	33	21	21	21	18	5
6	....	53	33	21	21	26	16	6
7	....	53	33	21	21	21	17	7
8	....	53	33	19	21	21	18	8
9	....	53	33	19	19	21	18	9
10	....	42	33	18	21	26	18	10
11	....	42	33	21	18	19	15	11
12	....	42	37	24	18	21	18	12
13	....	42	33	33	18	18	17	13
14	....	42	33	33	18	24	17	14
15	....	33	35	33	18	26	16	15
16	....	33	33	33	18	19	....	16
17	....	37	26	33	18	21	....	17
18	....	33	57	26	18	21	...	18
19	....	33	47	26	19	18	....	19
20	60	33	42	26	19	21	...	20
21	65	33	37	23	18	20	....	21
22	60	33	47	25	18	19	....	22
23	68	33	75	26	18	19	....	23
24	68	33	26	26	18	19	....	24
25	68	33	26	21	18	19	....	25
26	68	33	26	21	20	19	....	26
27	63	33	21	21	21	19	....	27
28	60	33	21	21	21	19	....	28
29	60	33	21	21	21	19	....	29
30	60	33	21	21	21	19	....	30
31	53	....	21	21	....	19	....	31
Mean	62.75	31.33	33.80	23.97	19.93	20.58	15.13	Mean



TABLE

SHOWING DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE BOULDER CREEK, AT GAUGING STATION No. 7.

1889.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. . .	770	430	133	72	39	. . .	1
2	. . .	756	436	103	52	28	. . .	2
3	. . .	585	423	114	51	28	. . .	3
4	. . .	473	375	90	48	28	. . .	4
5	. .	473	318	133	48	28	. . .	5
6	. . .	556	290	97	39	28	. . .	6
7	. . .	613	332	90	33	28	. . .	7
8	90	698	403	97	35	30	. . .	8
9	90	585	599	119	33	30	. . .	9
10	126	486	599	169	29	30	. . .	10
11	149	459	304	152	23	30	. . .	11
12	158	430	295	136	29	33	. . .	12
13	168	389	290	114	31	36	. . .	13
14	360	389	276	90	36	33	. . .	14
15	403	642	252	90	40	41	. . .	15
16	417	628	260	97	43	57	. . .	16
17	436	633	260	97	39	52	. . .	17
18	422	613	252	104	29	58	. . .	18
19	408	728	260	118	25	45	. . .	19
20	403	671	213	107	16	43	. . .	20
21	430	656	197	90	21	39	. . .	21
22	445	599	174	80	28	35	. . .	22
23	500	670	193	69	38	33	. . .	23
24	528	599	174	59	33	33	. . .	24
25	542	555	193	62	31	33	. . .	25
26	619	417	154	58	25	33	. . .	26
27	642	501	133	58	21	35	. . .	27
28	743	479	129	55	25	33	. . .	28
29	685	445	126	59	19	50	. . .	29
30	671	459	114	67	21	33	. . .	30
31	785	. . .	133	86	. . .	38	. . .	31
Mean	675.83	565.23	277.10	96.58	33.80	36.15	. . .	Mean



TABLE

SHOWING DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF  
TIME OF THE BOULDER CREEK, AT GAUGING STATION No. 7.

1890.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. . .	425	319	175	74	37	. . .	1
2	. . .	453	285	155	90	37	. . .	2
3	. . .	430	270	142	131	35	24	3
4	. . .	355	257	1,200	110	35	29	4
5	. . .	280	270	119	87	30	26	5
6	. . .	245	300	103	78	36	25	6
7	. . .	225	300	98	78	33	23	7
8	. . .	218	293	98	55	33	30	8
9	. . .	242	285	113	61	38	30	9
10	. . .	285	293	270	55	38	. . .	10
11	. . .	300	285	125	52	42	. . .	11
12	. . .	312	257	. . .	51	45	. . .	12
13	125	312	235	. . .	50	32	. . .	13
14	149	300	195	. . .	47	32	. . .	14
15	149	285	207	165	46	43	. . .	15
16	142	312	207	155	46	. . .	. . .	16
17	165	327	293	128	46	. . .	. . .	17
18	190	327	312	125	45	. . .	. . .	18
19	214	368	285	175	48	. . .	. . .	19
20	257	382	263	248	47	34	. . .	20
21	263	411	312	230	47	29	. . .	21
22	258	397	250	207	35	36	. . .	22
23	335	368	257	180	37	30	. . .	23
24	312	396	210	146	38	29	. . .	24
25	312	402	190	93	38	29	. . .	25
26	341	425	207	100	38	28	. . .	26
27	425	410	159	90	38	28	. . .	27
28	419	390	146	85	33	27	. . .	28
29	397	341	142	78	37	27	. . .	29
30	330	312	165	76	37	27	. . .	30
31	368	. . .	195	75	. . .	26	. . .	31
Mean	286.90	341.17	258.13	173.36	55.77	33.26	26.14	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE BIG THOMPSON CREEK, AT GAUGING STATION  
No. 8.

1889.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	.....	527	300	106	59	36	.....	1
2	.....	413	309	137	58	28	.....	2
3	.....	410	275	95	58	40	.....	3
4	....	366	223	96	56	45	.....	4
5	.....	354	207	96	55	45	.....	5
6	.....	389	206	96	55	45	.....	6
7	.....	397	206	96	55	45	.....	7
8	.....	362	370	91	57	50	.. .	8
9	.....	322	311	109	57	53	.....	9
10	.....	327	282	127	57	55	.....	10
11	.....	379	241	114	53	56	.....	11
12	.....	208	238	124	53	56	.....	12
13	.....	323	213	113	53	56	.....	13
14	.....	383	181	103	53	56	.....	14
15	.....	456	139	96	42	54	.....	15
16	.....	413	193	89	42	60	.....	16
17	.....	394	195	84	42	60	.....	17
18	.....	463	231	75	42	31	.....	18
19	.....	497	209	67	42	31	.....	19
20	130	487	163	83	44	31	.....	20
21	130	453	142	87	44	31	.....	21
22	313	403	139	84	44	36	.....	22
23	309	399	227	80	44	40	.....	23
24	359	421	194	78	44	40	.....	24
25	352	338	163	77	44	45	.....	25
26	424	311	143	78	44	45	.....	26
27	449	338	137	58	44	45	.....	27
28	497	323	116	57	44	50	.....	28
29	410	319	116	53	43	50	.. .	29
30	391	283	113	53	40	50	.....	30
31	546	....	108	53	.....	50	.....	31
Mean	359.17	381.60	199.70	88.87	48.93	45.64	.....	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF TIME OF THE BIG THOMPSON CREEK, AT GAUGING STATION  
No. 8.

1890.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. . . .	667	474	273	234	93	73	1
2	. . . .	712	471	281	234	65	68	2
3	. . . .	691	444	287	235	61	66	3
4	. . . .	582	444	229	219	52	66	4
5	. . . .	437	471	213	215	52	66	5
6	. . . .	375	461	205	215	52	66	6
7	. . . .	375	489	185	209	51	60	7
8	344	365	468	185	209	56	60	8
9	337	437	514	185	159	61	93	9
10	344	533	504	424	159	65	100	10
11	330	513	428	342	159	65	87	11
12	299	504	365	294	165	65	87	12
13	254	514	327	589	165	69	100	13
14	225	479	375	636	165	60	80	14
15	249	433	331	643	142	64	75	15
16	245	479	358	643	139	70	. . . .	16
17	279	504	399	542	139	75	. . . .	17
18	363	504	474	642	135	73	. . . .	18
19	330	549	479	642	135	97	. . . .	19
20	388	589	455	612	135	83	. . . .	20
21	540	523	1,603	551	123	80	. . . .	21
22	587	563	720	534	133	80	. . . .	22
23	563	561	561	485	133	80	. . . .	23
24	520	624	381	466	133	86	. . . .	24
25	520	653	332	425	73	80	. . . .	25
26	573	620	330	356	73	82	. . . .	26
27	683	556	255	356	73	78	. . . .	27
28	707	514	302	271	73	76	. . . .	28
29	638	514	327	234	74	76	. . . .	29
30	540	514	261	234	65	73	. . . .	30
31	595	. . . .	261	234	. . . .	73	. . . .	31
Mean	435.96	529.53	453.68	393.48	150.66	66.71	83.13	Mean

## TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME OF THE SOUTH BOULDER CREEK, AT GAUGING STATION No. 9.

1889

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. .	534	202	49	23	20	69	1
2	. . .	460	204	47	22	19	67	2
3	. . .	357	202	42	21	19	. .	3
4	. . .	315	168	42	21	19	. .	4
5	. . .	315	168	40	21	17	. .	5
6	. . .	315	168	38	20	18	. .	6
7	. . .	357	180	38	20	17	. .	7
8	. . .	402	205	38	21	16	. .	8
9	. . .	402	220	40	20	17	. .	9
10	. . .	303	195	52	20	16	. .	10
11	. . .	288	181	56	20	16	. .	11
12	. . .	280	197	51	20	15	. .	12
13	. . .	288	169	50	19	17	. .	13
14	. . .	303	128	74	23	17	. .	14
15	. . .	372	110	38	25	17	. .	15
16	. . .	357	102	38	23	29	. .	16
17	. . .	315	111	38	22	26	. .	17
18	. . .	350	270	38	22	20	. .	18
19	. . .	433	323	37	20	20	. .	19
20	. . .	433	190	35	20	19	. .	20
21	. . .	486	125	33	22	19	. .	21
22	. . .	357	326	31	23	18	. .	22
23	. . .	327	81	31	21	16	. .	23
24	. . .	303	78	31	26	16	. .	24
25	. . .	288	67	42	21	16	. .	25
26	402	280	62	27	20	16	. .	26
27	402	288	56	25	20	16	. .	27
28	534	270	58	25	20	16	. .	28
29	433	258	54	23	20	23	. .	29
30	520	220	49	23	20	23	. .	30
31	560	. . .	49	23	. . .	61	. .	31
Mean	475.17	335.20	151.55	38.55	21.20	19.80	! .	Mean

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME OF THE SOUTH BOULDER CREEK, AT GAUGING STATION No. 9.

1890

Day	May	June	July	August	Sept.	October	Nov.	Day
1	. . .	520	264	72	45	29	. .	1
2	. . .	535	227	72	67	29	. .	2
3	. . .	530	205	65	49	29	. .	3
4	. . .	441	191	61	47	29	. .	4
5	. .	324	191	51	43	33	. .	5
6	. . .	324	186	43	38	29	. .	6
7	. . .	264	191	48	43	31	. .	7
8	. . .	240	186	47	40	31	. .	8
9	180	255	175	45	38	35	. .	9
10	180	303	180	51	35	35	. .	10
11	175	289	173	84	35	33	. .	11
12	180	310	165	62	35	33	. .	12
13	175	343	148	84	33	30	. .	13
14	169	315	131	90	33	30	. .	14
15	202	296	124	79	31	30	. .	15
16	215	343	124	81	33	33	. .	16
17	180	335	116	72	30	35	. .	17
18	202	343	220	67	33	38	. .	18
19	219	350	152	74	30	33	. .	19
20	289	503	136	106	19	29	. .	20
21	315	380	128	72	40	27	. .	21
22	476	370	210	74	32	29	. .	22
23	472	343	110	70	31	29	. .	23
24	463	343	105	67	31	30	. .	24
25	343	315	100	59	32	28	. .	25
26	403	343	96	54	32	. . .	. .	26
27	433	325	87	54	32	. . .	. .	27
28	542	303	84	51	32	. . .	. .	28
29	531	303	78	48	31	. . .	. .	29
30	433	270	68	48	29	. . .	. .	30
31	433	. . .	87	47	. . .	. . .	. .	31
Mean	313.48	348.93	143.16	64.45	39.20	31.08	. .	Mean



## DAILY DISCHARGE

OF THE ARKANSAS RIVER AT CAÑON CITY, COLORADO—DRAINAGE  
AREA 3,060 SQUARE MILES.

1889.

Day	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Day
1	...	...	...	...	398	2010	810	290	243	228	248	335	1
2	...	...	...	...	418	...	810	258	228	228	243	331	2
3	...	...	...	...	438	...	840	258	214	208	274	307	3
4	...	...	...	...	438	...	702	324	214	208	307	324	4
5	...	...	...	...	398	...	652	324	214	200	274	387	5
6	...	...	...	...	360	...	652	324	214	200	290	420	6
7	...	...	...	...	379	...	606	324	214	200	397	438	7
8	...	...	...	...	342	...	652	324	200	200	307	410	8
9	...	...	...	...	324	...	606	2620	200	200	307	398	9
10	...	...	...	...	324	1624	1150	478	200	200	307	335	10
11	...	...	...	...	379	1488	702	324	200	190	307	324	11
12	...	...	...	...	398	1272	652	324	190	190	274	314	12
13	...	...	...	...	398	1038	606	324	190	190	307	335	13
14	...	...	...	...	398	1112	606	324	206	220	307	360	14
15	...	...	...	...	438	1230	606	324	243	214	324	360	15
16	...	...	...	...	438	1400	562	324	234	258	317	360	16
17	...	...	...	214	398	1488	562	324	206	284	307	342	17
18	...	...	...	214	398	1444	520	324	214	248	307	335	18
19	...	...	...	214	360	1400	562	324	214	222	307	314	19
20	...	...	...	228	324	1717	520	324	214	228	290	290	20
21	...	...	...	280	360	1578	520	342	214	222	290	274	21
22	...	...	...	360	499	1717	478	307	206	206	290	284	22
23	...	...	...	324	728	1578	520	290	228	200	307	300	23
24	...	...	...	307	840	1533	520	274	258	206	317	307	24
25	...	...	...	290	1190	1357	478	274	243	228	331	307	25
26	...	...	...	274	1670	1272	438	274	243	243	307	324	26
27	...	...	...	290	1960	1190	478	274	243	228	290	317	27
28	...	...	...	324	1578	1190	398	258	243	214	300	317	28
29	...	...	...	398	1624	1002	324	258	243	200	342	360	29
30	...	...	...	438	1578	1002	290	258	243	200	335	307	30
31	...	...	...	...	1910	...	324	243	...	214	...	307	31
Mean	...	...	...	300	600	1374	602	340	220	223	299	335	Mean

## DAILY DISCHARGE

OF THE ARKANSAS RIVER AT CAÑON CITY, COLORADO—DRAINAGE  
AREA 3060 SQUARE MILES.

1890.

Day	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Day
1	250	369	180	307	841	3090	2132	1425	555	...	...	...	1
2	250	423	316	307	841	3200	2025	1340	580	..	...	..	2
3	250	446	336	369	918	3260	2025	1175	625	...	...	...	3
4	316	446	348	356	961	3120	1875	1060	625	...	...	...	4
5	316	423	344	328	1051	2850	1780	990	580	...	...	...	5
6	250	400	344	369	952	2450	1780	855	555	...	...	...	6
7	328	382	356	391	1134	2270	1735	580	555	...	...	...	7
8	260	356	391	391	1520	2068	1645	505	555	...	...	...	8
9	293	369	382	304	1520	2097	1825	865	530	...	...	...	9
10	328	400	336	200	1520	2339	1825	325	530	...	...	...	10
11	336	356	324	238	...	2487	2025	285	505	...	...	...	11
12	250	356	209	269	...	2639	1735	230	505	...	...	...	12
13	220	316	200	241	...	2749	1645	215	505	...	...	...	13
14	180	340	282	400	...	2678	1425	230	505	...	...	...	14
15	180	316	340	376	...	2620	1425	305	480	...	...	...	15
16	250	365	365	437	...	2568	1645	660	480	...	...	...	16
17	332	356	365	414	...	2549	1510	630	455	...	...	..	17
18	316	400	348	428	...	2478	1510	715	455	...	...	...	18
19	356	396	391	484	2250	2549	1555	740	455	...	...	...	19
20	282	340	386	575	2300	2678	1555	885	455	...	...	...	20
21	241	356	386	570	2580	2720	1600	770	.	...	...	...	21
22	282	391	348	544	2700	2649	1690	740	..	...	...	...	22
23	316	369	348	446	2800	2620	1555	770	...	...	...	...	23
24	344	336	400	500	2870	2568	1425	715	..	...	...	...	24
25	344	336	356	673	2900	2620	1215	660	...	...	...	...	25
26	437	316	289	736	3070	2668	1175	630	...	...	...	...	26
27	494	250	220	980	3230	2620	1135	605	...	...	...	...	27
28	456	250	220	952	3270	2450	1060	580	...	...	...	...	28
29	446	.	220	890	3250	2320	920	580	...	...	...	...	29
30	356	...	220	868	3080	2370	920	580	...	...	...	...	30
31	356	..	300	...	2900	...	1340	580	...	...	...	...	31
Mean	310	363	320	477	2090	2611	1571	670	.	...	...	...	Mean

U. S. GEO. SURVEY.

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET PER SECOND  
OF THE RIO GRANDE, AT DEL NORTE, COLORADO.

[illegible]

TABLE

SHOWING THE DAILY MEAN DISCHARGE IN CUBIC FEET, PER SECOND  
OF TIME, OF THE UNCOMPAHGRE RIVER.

1890.

Day	May	June	July	August	Sept.	October	Nov.	Day
1	...	...	...	263	128	136	...	1
2	...	...	...	273	128	128	...	2
3	...	...	...	246	128	128	...	3
4	...	...	...	199	128	128	...	4
5	...	...	...	199	128	136	...	5
6	...	...	...	156	128	170	...	6
7	...	...	...	145	190	231	...	7
8	...	...	...	136	156	184	...	8
9	...	...	...	128	136	231	...	9
10	...	...	441	128	128	246	...	10
11	...	...	392	128	128	199	...	11
12	...	...	359	246	128	170	...	12
13	...	...	311	231	128	156	...	13
14	...	...	295	231	121	145	...	14
15	...	...	318	199	114	128	...	15
16	...	...	305	170	114	128	...	16
17	...	...	311	199	121	128	...	17
18	...	...	382	199	114	128	...	18
19	...	...	382	170	128	...	...	19
20	...	...	343	170	128	...	...	20
21	...	...	327	145	128	...	...	21
22	...	...	305	145	128	...	...	22
23	...	...	279	199	128	...	...	23
24	...	...	279	184	128	...	...	24
25	...	...	263	161	128	...	...	25
26	...	...	273	128	114	...	...	26
27	...	...	215	128	114	...	...	27
28	...	...	199	128	114	...	...	28
29	...	...	199	128	114	...	...	29
30	...	...	190	128	128	...	...	30
31	...	...	305	128	...	...	...	31

TABLE

SHOWING THE MEAN DISCHARGE IN CUBIC FEET PER SECOND OF TIME, FROM MAY 20TH TO SEPTEMBER 20TH, INCLUSIVE, FOR THE SEASONS OF 1889 AND 1890, OF THE FOLLOWING NAMED STREAMS:

STREAMS	1889	1890
Cache la Poudre River . . . . .	735.00	770.51
Big Thompson Creek . . . . .	214.53	425.42
St. Vrain Creek . . . . .	215.46	284.238
North and South Boulder Creeks . . . . .	461.97	419.334
Bear Creek . . . . .	64.40	33.98
South Platte River . . . . .	189.90	443.00
Arkansas River (at Cañon City) . . . . .	743.00	1,657.80
Rio Grande River (at Del Norte) . . . . .	.....	2,389.00

#### ARTESIAN WELLS.

In response to the printed circulars sent out, soliciting information as to artesian wells, many statements have been received, and under the headings of their proper districts, these will be found tabulated. In addition to those reported, the office is enabled, through the courtesy of Prof. L. G. Carpenter, of the Agricultural College, to furnish a list of many others collected by him, under the direction of the United States Department of Agriculture.

The list embraces those statements not heretofore published. It is to be regreted that the showing from the San Luis Valley is not more complete, but the failure of the Superintendent and Water Commissioners of that Division, to make any reports whatever, has left the department without information as to that section of the State.

Prof. Carpenter estimates the number of wells in the San Luis Valley at about 2,000, the largest measured by him giving a flow of 495 gals. per minute, being the town well at Alamosa.



Bucher's well at the same place gave a pressure, by pressure gauge, of 25 lbs. per sq. in. There are between 25 and 30 wells in Alamosa.

The Monte Vista wells, some 85 to 100 in number, gave a pressure of between 5 and 6 feet. The Espinosa well, some 20 miles north of the latter place, throws a solid 3 in. column of water nearly 40 inches above the casing, and flows between 300 and 400 gals. per minute.

La Jara has 19 wells all shallow, being about 33 feet in depth.

The line where water (flowing) ceases to be found, is but a short distance West of Monte Vista, and is not many miles south of La Jara.

The Denver Artesian Basin statement embraces a list of 74 wells, in which will be found the flow in gallons per minute, at the time of completion, also the flow at the date of last report made thereon, from which can readily be seen the decrease in flow in certain wells and increase in others between the respective dates.

This information is deemed desirable as indicating the degree of permanency in the supply and the effect of a multiplicity of wells upon the different water-bearing stratas.

---

### MOUNTAIN FORESTS.

The destruction of our mountain forests is the occasion of repeated complaints on the part of people living in South Park and in other localities along the base of the main range, and its effect upon the water supply for irrigation, is a question that has received some attention in the former reports from this department. While it is not the intention here, with the limited space at our command, to enter into a general discussion of the subject, it may not be amiss to make some remarks as the result of observations made along the base of the main range.

It is well known that our heaviest bodies of timber and that of the largest growth are to be found in the valleys and on the adjacent hill-sides of our principal streams and their tributaries, but a short distance below timber line, and that this section of the mountains is comparatively free from deep, narrow cañons and precipitous ledges. It is further well known that the most broken and rugged portions of the range are to be found on the very head waters of these streams, and very close to the summit of the Great Divide. The snows precipitated on the crest of the range and even on the gentle slopes adjacent thereto, on the western side, are carried by the prevailing west winds over the bold points on the eastern slope, and in close proximity to the summit, and there deposited to great depths. And here let it be observed, that such banks are not formed to any great extent on the western slope, and hence, as a rule, it is not practicable to secure water in quantity above timber line on that water-shed at such seasons of the year as would make it possible to divert it.

It is from these banks that the late water supply is supposed to be derived, but I apprehend that no inconsiderable amount of that supply is traceable to other sources.

Between the heads of the various streams bearing eastward, are to be found prominent spurs or divides putting out from the main range, and but a little below it in elevation, being above timber line. These divides are frequently elevated plateaus, with considerable extent of surface, with smooth, grassy slopes, and are sometimes known as bald mountains.

The snow-fall on these spurs is as great as on the main range, and the wind there has as keen an edge and as great a sweep. At the bases of these spurs, on either side, are to be found the dense forests to which reference is made, and in them much of the snow drifted from the heights above finds a resting place. Early

spring will find hundreds of acres of this timber belt covered with drifts, five, ten, and in places twenty and twenty-five feet deep. In these forests the fallen timber is frequently so thick as to render passage through it with a horse impracticable. Much of it is in an advanced stage of decomposition. Decayed vegetation covers the ground, absorbing and holding the moisture from the melting snow. The soil underneath it, and protected by it, is porous and spongy and holds water to such an extent as to render it marshy well up onto the hillsides. Springs abound, and every ravine carries a running brook, well into the summer months. It would be difficult to convince an old mountaineer, who is familiar with these forests, that the valley irrigator should not thank their protecting shades for much of the moisture that matures his crops.

Destroy these forests by fire and with them will burn the vegetable mold that covers the earth. Destroy them by the woodman's ax, and fire will soon follow among the tops, with a similar effect.

The snows that were wont to find lodgment there will then be carried on by the wind, evaporating them to such an extent as to far over-balance any consumption of moisture in the support of forest life.

Under the action of the wind, the earth is soon divested of its light soil, and the exposed gravel and sand becomes compact, hard and dry, shedding the Spring rains like the roof of a house. The springs cease to flow and the ravines become dry.

The results are, sudden and unusual floods, sending immense volumes of water to the valleys, without notice, and beyond all possibility of control, with existing facilities.

The laws for the protection of these forests from the ravages of fire, cannot be too stringent, and more efficacious methods should be devised for their execution.

**DUTY OF WATER.**

This department is in receipt of numberless letters from within and without the State, asking every conceivable question pertaining to the subject of irrigation, but probably no conundrum is plied with more persistent frequency than that relative to the duty of water, and no answers are more replete with glittering generalities than those bearing upon this subject.

The waters of the eastern slope being very closely appropriated and the means of diversion provided, it is not of so much importance to determine the present duty of water for future canal development, as to realize its maximum duty for the better cultivation of lands already under ditch. Whatever service water may perform at this time, we know that service can be increased by eliminating many of the sources of waste apparent on every side. The varied conditions of soil and surface preclude the possibility of a uniform standard, but there are local causes for a diversified duty, even where the lands are not appreciably different.

Water rights vested on a basis of the low duty assigned to water ten years ago, have, in instances, deteriorated lands and reduced their productiveness by a surfeit in application, while on adjoining lands through an enforced economy, a higher duty, better condition of the soil, and greater productiveness have resulted.

Unskilled labor has a penalty of 25 to 50 per cent. attached to it in the application of water, and unfortunately this class is too prevalent in the irrigating fields, in many cases, no other being obtainable.

An abundant water supply tends to carelessness in its application and consequent waste. Where liberal and old water rights are provided, it is frequently the practice to turn the water upon the land and permit it to run without change or attention throughout the night, and sometimes during the day, a large volume of the water soaking into the soil without benefit to the crop.

There is much complaint on this score by parties whose fields have suffered from an insufficient supply.

The duplication of ditches is another fruitful source of waste, reducing the duty of the volume of water, as indicated by the gauging stations in the cañons.

Reference to some of the maps prepared by this department, will show, in different localities, several ditches paralleling each other at inconsiderable distances apart, the upper one of which could be made to answer the purposes of all with marked economy in water, as well as a large saving in capital.

Too little attention has also been given to the proper preparation of the surface to facilitate the rapid spreading of the water.

This is principally the result of too large individual ownership in land, rendering it impracticable to give close supervision and secure careful preparation of the land.

The best results will be obtained from small proprietary rights in land, and a consequent higher state of cultivation.

The ownerships of the cultivated lands of the State should be multiplied by ten and the population increased to that extent.

We are enabled to give some general results as to the service water has performed in some of the older districts of the State, for the two years last passed, based upon the gaugings of the several streams, at the cañons, and the areas under cultivation, as reported by the Water Commissioners.

For the purposes of the estimates herein given, we have assumed the irrigating season to be four months, embracing the time from May 20th to September 20th, inclusive.



In 1889, within the dates above given, the mean discharge of the Cache la Poudre river, was 735.97 cubic feet per second of time, or second feet.

The area cultivated under the ditches from this stream, as reported by the Water Commissioners of District No. 3, was 139,222 acres. By calculation, it will be found that the mean discharge for the time given, spread upon the acreage reported, would cover it uniformly to a depth of 1.178 feet, and would give a duty for the water measured at the cañon, of 189,168 acres per second foot, continuous flow.

The precipitation at Fort Collins for the period stated was 0.682 feet in depth. Assuming this to be uniform throughout the district, and adding to the irrigated depth, and we have 1.178 plus 0.682 equals 1.860 feet, as the amount of depth of moisture received by the crops cultivated on the acreage given.

But it is claimed that much of this water is used over and over again, as the result of seepage back into the river; which is undoubtedly true. Referring to the tabulated statement for 1889, under the head of "Seepage," it will be seen that the seepage flow in the river, at the time of the measurement in October, was 98.96 cubic feet per second of time. The volume of seepage water was probably greater at the close of the irrigating season than at any other time, but assuming it to have been uniform throughout the season, and adding the amount per second to the mean discharge of the river, we have 735.58 plus 98.96 equals 834.93 second feet, which would give a duty of 166.62 acres per second foot.

For the year 1890, the same stream gives a mean discharge of 770.51 cubic feet per second. Area cultivated, 139,222 acres, which would be covered to a depth of 1.254 feet, giving a duty of water of 180.687 acres per second foot.

The mean precipitation at all of the stations in the district for the period is 0.338 feet, which added to depth above gives 1.592 feet as the average depth supplied to the lands.

The seepage flow in the river for October, 1890, as per table above referred to, is 100.793 cubic feet per second; adding this to mean discharge, we have 770.51 plus 100.793 equals 871.30, giving a duty of 159.78 acres per second foot, deducting lands irrigated from stored waters as for 1889, and the duty would be 166.64 acres, adding seepage flow to river discharge and the duty would be 147.36 acres.

#### BIG THOMPSON CREEK—DISTRICT NO. 4.

For 1889—Mean discharge, 214.53 cubic feet per second; area cultivated, 91,037 acres; giving in depth over area, 0.579 feet, and a duty of 424.35 acres per second foot.

For 1890—Mean discharge, 425.42 cubic feet per second; area cultivated, 89,790 acres; giving in depth over area, 1.192 feet, and a duty of 211.06 acres per second foot.

#### ST. VRAIN CREEK—DISTRICT NO. 5.

For 1889—Mean discharge, 215.46 cubic feet per second; area cultivated, 94,013 acres; equivalent in depth over area, 0.563 foot; duty, 436.33 acres per second foot. The precipitation at Longmont was for the period, 0.532 foot, which added to above gives depth of 1.095 feet over area cultivated.

For 1890—Discharge, 284.238 cubic feet per second; area cultivated, 94,365; equivalent in depth over area, 0.739 foot; water duty, 332.69 acres per second foot.

SOUTH BOULDER AND BOULDER CREEKS—  
DISTRICT NO. 6.

For 1889—Mean discharge, 461.97 cubic feet per second; area cultivated, 77,682 acres; equivalent in depth over area, 1.406 feet; duty, 168.153 acres.

For 1890—Discharge, 419.334 cubic feet per second; area cultivated, 76,682 acres; equivalent in depth over area, 1.345 feet; duty, 182.866 acres.

BEAR CREEK—DISTRICT NO. 9.

For 1889—Mean discharge, 60.40 cubic feet per second; area cultivated, 10,173 acres; equivalent in depth over area, 1.46 feet; duty, 168.42 acres.

For 1890—Discharge, 33.98 cubic feet per second; area cultivated, 8,112 acres; equivalent in depth over area, 1.030 feet; duty, 239 acres.

TABULATED STATEMENT OF WATER-DUTY ON STREAMS INDICATED  
FOR 1889 AND 1890.

STREAMS GAUGED.		Mean discharge from May 20 to September 20 in cubic feet per second	Area cultivated in acres	Equivalent in depth over area in feet	Rain-fall during period	Total depth over area	Duty in acres per cubic foot
Cache La Poudre . . .	1889 .	735.97	139,222	1.178	0.682	1.860	189.168
	1890 .	770.51	139,222	1.254	0.338	1.592	180.687
Big Thompson . . . .	1889 .	214.53	91,037	0.579	no data	. . . .	424.35
	1890 .	425.42	89,790	1.192	no data	. . . .	211.06
St. Vrain . . . . .	1889 .	215.46	94,013	0.563	0.532	1.095	436.33
	1890 .	284.238	94,365	0.739	. . . .	. . . .	332.69
South Boulder and Boulder Creek . . .	1889 .	461.97	77,682	1.406	. . . .	. . . .	168.15
	1890 .	419.33	76,682	1.34	. . . .	. . . .	182.86
Bear Creek . . . . .	1889 .	60.40	10,173	1.46	. . . .	. . . .	168.42
	1890 .	33.98	8,112	1.03	. . . .	. . . .	239.02

The Water Commissioners of the districts above referred to, in their reports, give the number of days water is carried by each ditch and the amount. Using these figures as a basis for calculation, a much higher duty will be given to water than as above tabulated, but when measurements are made in so many places, the liability to error is very much increased, and, furthermore, proper facilities for accurate measurements are not provided in many of the ditches.

Unfortunately, we have no statistics showing the crops raised from the cultivated areas, reported by the Commissioners, nor to what extent there were failures from a scarcity of water. Where lands are irrigated from stored or seepage water, the quantities are given.

---

#### INJUNCTION PROCEEDINGS.

General report credited the range with a much greater snow-fall during the winter of 1889-90, than the year previous, and the responses to circular letters of inquiry from this office corroborated that impression, the mean of the estimates sent in giving the increase at 46 per cent. In full confidence of a good water supply upon the melting of the snow, farmers generally planted an increased acreage, trusting to the usual early rains for moisture to germinate and start the crops. The rains failed to materialize, and very suddenly there was a general demand for water, and the waters were also kept back by the unusual cold weather in the mountains.

Distress seemed imminent, and injunctions were resorted to, in several cases, to secure temporary advantages and to obtain relief from alleged unfairness, in the distribution of the waters, by this Department. Other suits were instituted, for other purposes, as will be herein set forth as briefly as possible.

The first of the suits was instituted April 28, 1890, and was entitled:

DAVID A. RANKIN ET AL.,	<i>Plaintiffs,</i>
<i>vs.</i>	
THE COLORADO AGRICULTURAL DITCH COM- PANY, THE CLEAR CREEK AND PLATTE RIVER MILL AND DITCH COMPANY, THE STATE ENGINEER, SUPERINTENDENT OF IRRIGATION AND WATER COMMISSIONER OF DISTRICT No. 7,	<i>Defendants.</i>

The groundwork for the complaint was an application on the part of the plaintiffs, to this Department, to have the water decreed to the Clear Creek and Platte River Mill and Ditch Company, by virtue of its enlargement in 1863, to wit:  $20\frac{5.6}{100}$  cubic feet of water per second of time, turned into the Colorado Agricultural Ditch, alleging that the two ditches had the same head-gate; that their lines were practically parallel and contiguous; and that this water was originally appropriated to and for their lands, which lay, principally, under the Clear Creek and Platte River Ditch, but on account of the difficulty of diverting the water, at the head of the latter ditch, and for the purpose of securing a full and uniform flow of water, they had constructed the Colorado Agricultural Ditch.

For the purpose of determining the matter of the application, I had an examination and measurement made of the Clear Creek and Platte River Ditch, from which it was ascertained: that the points of diversion of the two ditches were originally about 80 rods apart; that of the Colorado Agricultural Ditch being the upper; that owing to the difficulty of maintaining a head-gate and dam, at the lower place, the two were merged into one, and the waters of both ditches carried in the Colorado Agricultural Ditch, to a point of divergence near the old head of the Clear Creek and Platte River Ditch, and further that the Clear Creek and Platte River



Ditch did not have, at the time of measurement, and from the best information obtainable, never had capacity sufficient to carry the water decreed under its original appropriation; and that consequently, any waters used on the lands of the plaintiffs, from the latter ditch must have been from that original appropriation; that they could not have appropriated and used water the ditch could not carry.

Had the application been made to transfer a portion of the water decreed under the original construction (within the limits of the ditch's capacity), a different conclusion would probably have been arrived at, for it was not intended to deny the right of the plaintiffs to carry the water justly belonging to them through the best and most economical channels, onto their lands.

The Colorado Agricultural has a decree for 30.20 cubic feet, dated March 5, 1867.

The Clear Creek and Platte River has a decree for  $49\frac{5}{100}$  cubic feet, under original construction, dated November 1, 1861, and for 20.56 cubic feet, under enlargement, dated November 5, 1863.

The effect of such a permit would be to give the Colorado Agricultural, a ditch constructed in 1867, a decree for 20.56 cubic feet, dating back to 1863, and this water must be taken from some other ditch having an appropriation prior to the latter date, because it could not be taken from the Clear Creek and Platte River, a ditch that could not carry it and had, therefore, never appropriated it.

The court ordered and adjudged that the officers of this department be directed to turn and allow to flow, in the Colorado Agricultural ditch, all of the water appropriated and decreed to the said Clear Creek and Platte River Mill and Ditch Company, by virtue of its enlargement in 1863, to wit: 20.56 cubic feet of water per second of time.



On or about the first of June, 1890, the Superintendent of Division No. 1, ordered all ditches in the valley districts, post-dating January, 1867, shut down, in order to supply older priorities in District No. 2, on the Platte.

By this order, the supply of the Farmers' High Line, and four other large canals, taking water from Clear Creek, was cut off, and the owners of said canals are the plaintiffs in the following suit.

On June 9, 1890, a temporary injunction was granted by Hon. J. W. Barnes, Judge of the County Court of Jefferson county, in the absence of the Judge of the District Court of said county, in the case of

THE FARMERS' HIGH LINE *et al*,  
Plaintiffs,

*vs.*

J. P. MAXWELL *et al*,  
Defendants.

The case came up before Judge Becker, on a motion to dissolve the injunction, and is concisely stated in the first part of his decision, as follows:

"This is a contest between the ditch owners of District No. 7, who take water from Clear Creek, and those of District No. 2, who take water from the Platte.

"The defendants are State officers, in whose hands is placed the duty of superintending the distribution of water used for irrigation purposes, and administering the irrigation laws of the State.

"The contention arises from an order made by the Superintendent of Irrigation upon the Commissioner of District No. 7, that a certain amount of water should be excluded from the ditches taking water from Clear creek at or near Golden, and that such water should be sent down Clear creek to replenish the Platte, and thus afford a supply for ditches taking water from the Platte below the entrance of Clear creek, on the ground that said Platte ditches were prior in time of appropriation."

Said order was obeyed, and a temporary injunction was granted, restraining its enforcement; and the motion

now made is to dissolve the injunction. Space forbids giving the full text of the decision, as it quotes quite extensively from the law pertaining to the duties of Water Commissioners and Superintendents of Divisions, but the following points are made.

*First*—That the Superintendent did not have the necessary information from the Water Commissioners, in the form prescribed by law, on which to base his order.

*Second*—That the ditches in District No. 23, embracing the South Park, were not ordered closed to a date corresponding with those on the valley; and

*Third*—That the law of 1887, which creates the office of Superintendent, and defines his duties, is unconstitutional, in so far as its effect is to determine rights of priority in the waters of the natural streams against persons who have had no day in court, by making the decrees rendered in one district binding and conclusive against claimants in another separate and distinct district, who have also received decrees.

The motion to dissolve the injunction was overruled. The Water Commissioner was, however, ordered to distribute the waters of Clear creek among the ditches of that stream, in accordance with their order of priority.

It is not the intention to enter into a discussion of this decision; but justice to the Superintendent of Division No. 1 requires a statement of the extenuating circumstances connected with his position in the case.

*First*—It has been his practice to exact from the Water Commissioners a weekly statement, covering the points required by the law, and printed blanks are furnished them for this purpose. That this has not been rigidly enforced in all cases and under all circumstances is due to the fact that many of the Water Districts cover large extents of territory, and the incessant demands upon the time of the Commissioner in distributing the

ever-changing volumes of water among the numerous ditches, in regulating head-gates and settling controversies where gates have been forced open and changed, will not permit of his taking the time to collect some of the data required; and moreover, this data is already in possession of the Superintendent through more reliable sources. As an instance, take District No. 2 (so vitally interested in this suit) which extends from Denver some fifty miles down the Platte. If the Commissioner was required to report daily or weekly the amount of water coming into the District, it would involve, for each report, a measurement of the Platte, at Denver, and the mouth of Clear creek, St. Vrain and Big Thompson, the amount flowing one day being no index of what was coming the next; and besides, the shifting beds at the mouths of the streams mentioned, would require the taking of a new cross-section at every measurement, occupying a needless amount of time.

This office keeps a gauging station in the Platte, at Denver, and the discharge into District No. 2 is taken and recorded each day, and is always accessible to the Superintendent. The Commissioners on the Boulder, St. Vrain and Big Thompson report when, and the amount, if any, going out of their districts. Further than this the Superintendent requires from the Commissioner telegrams in emergencies and informal communications wherever they may be in their Districts; and in the Districts adjoining Denver, personal interviews whenever practicable. But all this in the opinion of the learned Judge is not legal information upon which action can be based.

If such is the case, the law should be changed, for flood storms do not await the convenience of Commissioners, and the telegraph is an important factor in securing an equitable distribution of the water.

He who expects the letter of the law in relation to irrigation to be executed with the precision of clock-

work, and that infallible results will be obtained, has a small conception of the tangled web of difficulties in the way, and a meagre knowledge of the uncertainties of the element to be manipulated.

With regard to the second point of error, let it be borne in mind that the South Park has never heretofore been considered in the distribution of the waters of this division, although irrigation has been practiced there for many years, and it was only in October of 1889, that the adjudications took place in that district. It was consequently late in the season of 1890 before the Superintendent's office was furnished with the decrees and had official knowledge of the claims and rights of the respective ditches.

There were over 200 decrees issued, and these all had to be tabulated and their relative priorities adjusted with reference to the rest of the division.

It was also a mooted question much discussed, as to the effect irrigation of natural grass lands there would have on the water supply in the valley. The ditches there are principally short, and seldom extend a mile away from the streams. Some contended that the soaking of the grass lands contiguous to the channels, in the early part of the season, tended to hold the waters in store, and when later they drained back into the channels, the valley would derive the benefit, where most needed for later irrigation. However this may be, the Superintendent ordered a cut in the ditches of the South Park, at the same time the order was given here, but evidently erred in fixing the date at 1879. In explanation of this, he stated that the cut was an experimental one, as he knew nothing of the quantity of water diverted by the ditches there, if any, the Commissioner having reported for duty but a few days previous, and then principally for the purpose of getting the head-gates and rating flumes in shape for the reception of water.

The Park District is some 50 miles square, and the Superintendent anticipated that before his order could be fully carried out there he would be enabled to raise to the same date on the valley, as, with the fluctuations of the streams, the cuts are, at most, a "cut and try" process.

The Water Commissioner of District 23, after consultation with attorneys, and having in view the injunction granted at Golden, declined to shut down any ditches whatever.

The Superintendent then made a personal inspection of the district, and endeavored to obtain the necessary information as to location of ditches, to himself close them down, in accordance with the order, but aside from being unable to secure the needed information, he found that in the excited condition of the people it would require the State militia to enforce his orders. An assistant from this office was sent to the district, with instructions to gauge all streams flowing through the Park, measure the full capacity of ditches, as far as practicable, and the quantity being diverted by them. About a month was occupied in this work, and, as a result, it was ascertained that—

There was flowing, in nine tributaries of South Fork—measured above all ditches, . . . . .	286.67 cu. ft. per sec.
Diverted into ditches, measured . . . . .	160.00 cu. ft. per sec.
Continued in above streams . . . . .	126.67
South Fork—measured above Howbert, and below all above ditches . . . . .	348.75 cu. ft. per sec.
Tarryall, Michigan and Jefferson creeks—measured at heads, but emptying below Howbert. . . . .	50.09 cu. ft. per sec.
Diverted in ditches from above streams . . . . .	20.00 cu. ft. per sec.
Continued in above streams . . . . .	30.09 cu. ft. per sec.
North Fork—measured at Junction . . . . .	120.00 cu. ft. per sec.
Mean discharge of Platte river, at Deansbury, for July, deducting the local flood storm from Eleven Mile Cañon. . . . .	507.00 cu. ft. per sec.

The assistant, in charge of measurements, reported rainy weather during July, and that considerable quantities of water were coming into the river in every direction, above Howbert, from seepage and small ravines,



which it was impracticable to measure, thus accounting for the increased flow at that place.

From the figures above given, though not conclusive, it would seem there was some ground for the opinion that irrigation in the Park did not materially affect the flow of the water to the valley, nor to any great extent retard it.

The method of applying the water there, if correctly reported, must be highly detrimental to the soil and the quality of the grasses, and under different conditions would be extremely wasteful of the water, it being the practice to turn the water on to the lands at the beginning of the irrigating season, and allow it to flood them continuously until turned off for the haying.

In this connection, it may be well to make some observations relative to the water-rights of that district. By reference to the tabulated statement of the decrees, it will be seen that 4,665.61 cubic feet per second are allotted to 209 ditches. Such figures, upon their face, might well fill the valley farmers with apprehension, as it would require the waters from all the streams in northern Colorado to satisfy them, but a measurement of 65 of the ditches, and those among the largest, whose combined decrees entitle them to 2,055.63 cubic feet per second, gave them a maximum carrying capacity of only 692 cubic feet per second. A few would carry the full amount decreed, but many fell short eight and ten times the requisite capacity. The tabulated statement referred to also shows the maximum capacity of the 65 ditches measured.

July 16-19 injunctions were obtained from the County Court of Larimer county, in the absence of the District Judge, restraining Water Commissioner W. A. Bean, of District No. 4, from shutting the water out of the Loudon, Handy and Hillsborough ditches, except for the benefit of older priorities, on Big Thompson Creek.



Pursuant to an order from the Superintendent of this division, the Water Commissioner closed the gates of the above named ditches, to satisfy older priorities on the Platte, whereupon the injunction was obtained, and later, I am informed, made permanent by the District Court.

This suit is similar in its nature to that of June 9, before Judge Becker, bringing in question the constitutionality of the law of 1887.

The Attorney-General holding that it was not a part of his official duty to visit different portions of the State in the defense of Water Commissioners, no defense was made on the part of the State.

---

MARY ANN EDWARDS,

*vs.*

J. P. MAXWELL *et al.*

---

This was a proceeding instituted July 21, in the District Court of Arapahoe county, before Judge Rising, to secure water for a ditch on Clear Creek, claimed to carry one cubic foot or less, per second, and for which there was no decree.

Still pending.

---

AGRICULTURAL DITCH CO.,

*vs.*

J. P. MAXWELL *et al.*

---

This suit was instituted July 23, 1890, to obtain water for domestic and stock purposes. The ditch not being entitled to water under its decree, an application to run water for domestic purposes was denied by the Water Commissioner.

Judgment was given for ten cubic feet per second.

---

RICOLO CHICRICKIQUE,

*vs.*

J. P. MAXWELL *et al.*

---

Before Judge Allen, of the District Court of Arapahoe county, August 1, 1890.

Case similar to that of Marry Ann Edwards. Application granted.

---

FARMERS' INDEPENDENT DITCH CO. }

*vs.*

AGRICULTURAL DITCH CO. *et al.* }

---

Instituted September 1, 1890, asking an injunction and \$50,000 damages.

This, a counter-suit to the one of June 9, before Judge Becker and involves the same issues.

Still pending.

#### DOMESTIC USE.

Early in the season of 1889, and soon after entering upon the duties of this office, the question of the domestic use of water was raised, by repeated applications, to divert water into ditches for that purpose. Realizing that if permission was granted in one case, it could not be consistently denied in another equally meritorious, so far as the needs were concerned; and further realizing that, with the latitude given in such cases, trees, gardens, and even field crops sometimes become very domestic in their nature; and being fully persuaded that the establishment of such a practice generally would tend to subvert priorities, would be very injurious to the irrigation interests, and would result in great loss of water, without compensating returns, I determined to grant no permits for that purpose, except where specially ordered by the Courts so to do. The wisdom of this course directly became apparent, for

applications soon ceased, and very general satisfaction was expressed.

While in a few cases, doubtless, people living along the lines of canals, at remote distances from their heads, became distressed for domestic water, at times when the irrigating supplies were shut out, it will not be denied that, in a majority of instances, such distress was sympathetic in its nature, and resulted more from the wilted condition of their crops, than from the parched condition of their throats, and wherever water was granted for domestic use, more or less irrigation was practiced. One cubic foot of water per second, used strictly for domestic purposes, would more than supply the needs of all the people on the line of the longest canal in the State, but that quantity would cut a sorry figure in the canal, and many times that quantity would be evaporated and filtrated to secure one drop in the bucket of the farmer at the lower end of the canal. Not a few complained that the cattle in their pastures were suffering for water, but the reply was that "Cattle could be driven to water, while crops could not."

These complaints came mainly from the owners of the large and extended canals, but where such canals have been operated for a series of years, springs are formed under their lines, in nearly every ravine, and those are frequently more accessible than the canal, where the farmer lives some distance from the latter.

Small reservoirs and other receptacles can also be built to tide over such emergencies.

In one instance, only, has an appeal been made to the Court, and that was in the case of the Agricultural Ditch diverting water from Clear Creek, wherein the Court granted 10 cubic feet per second for domestic purposes. This amount was, of course, taken from a prior appropriation and deprived at least a thousand acres of crops of the moisture to which their priorities of appropriation under the law entitled them.

## WATER DIVISION No. 1.

## SOUTH PLATTE DIVISION.

Mr. I. H. Batchellor, Superintendent of Irrigation; appointed April 23, 1889; residence, Denver, Colo.

Water Division No. 1 has had added to its list five new water districts since the last report, namely: Numbers 46, 47 and 48, embracing the North Park, and numbers 64 and 65, in the north-eastern part of the State, the boundaries of which will be found under their respective headings.

The Superintendent reports generally, for 1889 and 1890, a very low stage of water in the streams, consequent upon which there arose many complications between the conflicting interests of different districts; that much of his time during the irrigating season was occupied in hearing complaints and in the settlement of these differences; that during the year 1890, as a result of his efforts to secure water for District No. 2, in accordance with its priorities, temporary injunctions were obtained restraining him from closing ditches in No. 7, for the benefits of older rights in No. 2, and that these restraining orders have interfered very materially with the legal and equitable distribution of the waters of his division. (The orders referred to will be found under the head of injunctions.) He further reports that the Water Commissioners of his division, with one exception, have responded promptly to all orders for the closing of ditches and executed them, where not restrained by the courts. The exception was in the case of the Water Commissioner of District No. 23, South Park.

On June 4, 1890, instructions were mailed to this Commissioner to close all ditches to a certain date, and reply received that instructions would be followed, but that on the 13th of same month the following reconsideration of his resolution was received:

## COMMUNICATION.

Office of M. R. HANLIN,  
WATER COMMISSIONER, DISTRICT No. 23, }  
FAIRPLAY, COLO., June 13, 1890.

HON. I. H. BATCHELLOR,  
*Supt. Irrigation, Division No. 1:*

DEAR SIR:—Since receipt, on the seventh, of your letter of the fourth instant, instructing in behalf of valley irrigators in other Water Districts to close down all irrigation ditches of priorities later than January 15, 1879, I have made diligent examination by myself and counsel to determine whether my duty is to obey these instructions or the decrees of the District Court of this county, establishing priorities in this Water District.

The question is both difficult and important, but must be decided promptly even if somewhat hastily, and I have concluded that, until differently advised by some court decision, I must follow the decrees aforesaid wherever your instructions may be in conflict with the same. Accordingly, I shall, for the present, decline to carry out your instructions in said letter contained.

Respectfully,

M. R. HANLIN,  
*Water Commissioner, District No. 23.*

That subsequently the Superintendent made a personal inspection of the district and found it impracticable to enforce the order in the excited condition of the people.

In districts 46, 47 and 48 the water rights not having been adjudicated, the Commissioners were not called out, and hence no reports were made. In District No. 65 no application had been made for the appointment of a Water Commissioner. That in all other districts full reports had been received and summarized by the Superintendent, in his report to this office.

---

*Water District No. 1*—James Hurley, Commissioner, Orchard, Morgan county.

Mr. Hurley reports for 1890, eleven ditches carrying water during the season and 16,775 acres irrigated therefrom, as more fully shown by the following statistical tables.

He was called out April 1, and found no difficulty in satisfying all demands for water until June 1, from which time on there was a scarcity.



# COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION No. 1—DISTRICT No. 1.

NAME OF DITCH	Length thereof in miles.	Number of days water was carried therein.	Average amount of water carried during season of 1890 in cubic feet per second of time.	Number of acres that can be irrigated therefrom.	Number of acres of alfalfa irrigated therefrom.	Number of acres of seeded grasses other than alfalfa irrigated therefrom.	Number of acres of natural grasses irrigated therefrom.	Number of acres of other crops irrigated therefrom.	Number of acres irrigated from seepage.	Total number of acres irrigated in district.
The Hoover Ditch . . . . .	3	120	15	800	75	. . . . .	300	200	. . . . .	. . . . .
Illinois Ditch . . . . .	4	90	20	2,000	40	. . . . .	800	20	. . . . .	. . . . .
Putnam Ditch . . . . .	9	125	15	2,560	200	. . . . .	1,100	500	. . . . .	. . . . .
Weldon Valley Ditch . . . . .	17½	120	28	7,000	1,000	20	. . . . .	2,000	320	. . . . .
Putnam, first enlargement . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Platte and Beaver Main Ditch . . . . .	25	120	25	20,000	1,000	. . . . .	. . . . .	1,500	. . . . .	. . . . .
Platte and Beaver Supply Ditch . . . . .	25	110	20	15,000	800	. . . . .	. . . . .	1,000	. . . . .	. . . . .
Fort Morgan Canal . . . . .	25	90	25	20,000	2,000	. . . . .	. . . . .	2,500	50	. . . . .
Hardin Canal . . . . .	3	90	8	500	50	. . . . .	200	200	. . . . .	. . . . .
Denel & Snyder Canal . . . . .	7	40	10	2,500	300	. . . . .	500	60	. . . . .	. . . . .
Riverside Canal . . . . .	5½	30	5	2,000	40	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Totals in District . . . . .	124	. . .	171	72,360	5,505	20	2,900	1,986	370	10,757



## STATEMENT CONCERNING ARTESIAN WELLS

IN THE DENVER ARTESIAN BASIN, SHOWING THE FLOW OF WATER AT THE DATE OF COMPLETION AND AT THE DATE OF THE LAST REPORT OBTAINABLE.

NAME OF WELL, OR OWNER	LOCATION			DATE OF COMPLETION	Total depth of well in feet	Depth of prin- cipal flow	FLOW IN GAL. PER MINUTE		Depth from which pumped	DATE OF LAST REPORT	REMARKS
	$\frac{1}{4}$ Sec	T	S R W				At date of comple- tion	At date of last re- port			
Mrs. M. Brantner . . . . .	. . . .	36	1	67	May 4, 1887	430	15	7½	. . .	Aug., 1890	. . . . .
D. E. Young . . . . .	. . . .	35	1	67	Feb., 1885	316	6	5	. . .	May, 1888	. . . . .
Fred Reithman . . . . .	NW . .	25	1	67	Feb. 29, 1887	306	2	1	. . .	Jan., 1888	. . . . .
F. Wolpert . . . . .	S½ . .	3	2	67	Dec. 10, 1886	323	10	8	. . .	May, 1888	. . . . .
R. Morris . . . . .	NW . .	4	2	67	Jan. 22, 1887	300	45	40	. . .	June, 1888	. . . . .
M. Cline . . . . .	. . . .	5	2	67	Mar. 20, 1886	280	10	5	. . .	June, 1888	. . . . .
Solomon Cline . . . . .	SE . .	5	2	67	Mar., 1886	416	16	4	. . .	June, 1888	. . . . .
R. A. Southworth . . . . .	. . . .	6	2	67	. . . 1885	480	4	. . .	. . .	Sept., 1889	. . . . .
P. E. Gleason . . . . .	. . . .	8	3	67	Nov. 25, 1876	620	40	10	. . .	Sept., 1890	. . . . .
George Wooley . . . . .	SE . .	18	2	67	Sept., 1886	216	35	30	. . .	Sept., 1890	. . . . .
David Wolpert . . . . .	. . . .	19	2	67	Oct. 20, 1884	600	120	60	. . .	June, 1888	. . . . .
Upper Well, Cherry Hill Farm .	. . . .	31	2	67	July, 1887	531	20	10	. . .	Sept., 1890	. . . . .
Lower Well, Cherry Hill Farm .	. . . .	31	2	67	Mar., 1887	295	60	30	. . .	Sept., 1890	. . . . .

Broadwell No. 1 . . . . .	5	3	67	April 30, 1889	750	. . .	8	. . .	. . .	Sept., 1890	. . . . . Pumps
Dr. A. Stedman . . . . .	NE . .	24	68	Oct., 1885	325	. . .	6	3	. . .	Sept., 1890	. . . . .
J. B. Ish . . . . .	NE . .	25	68	Fall, 1887	400	400	50	30	. . .	June, 1888	. . . . .
V. S. Wright . . . . .	. . . .	25	68	Oct., 1886	560	560	14	1½	. . .	Oct., 1890	. . . . .
W. W. Groves . . . . .	NW . .	25	68	Sept., 1886	389	389	40	30	. . .	Sept., 1890	. . . . .
A. L. Ish . . . . .	. . . .	25	68	Sept. 20, 1886	337	333	100	60	. . .	Sept., 1890	. . . . .
B. F. Harrington . . . . .	W½ . .	33	68	May, 1887	821	600	10	. . .	. . .	Sept., 1890	Pump and wind mill
B. F. Harrington . . . . .	W½ . .	33	68	Nov. 11, 1886	465	440	12	. . .	. . .	Aug., 1888	. . . . .
Frank P. Watson . . . . .	. . . .	35	68	Oct. 5, 1886	420	375	35	30	. . .	Sept., 1890	. . . . .
Z. T. Block . . . . .	. . . .	35	68	Nov., 1889	415	415	48	44	. . .	Nov. 3, 1890	. . . . .
Jacob Sandhofer . . . . .	. . . .	35	68	Oct., 1888	544	450	20	4	. . .	Nov., 1890	. . . . .
A. R. Taggart . . . . .	. . . .	35	68	Oct., 1888	427	426	30	15	. . .	Nov., 1890	. . . . .
E. Reithman . . . . .	. . . .	1	68	Mar. 2, 1884	318	318	35	15	. . .	June, 1888	. . . . .
School District No. 9 . . . . .	SW . .	5	58	Oct. 15, 1887	385	375	25	10	. . .	Sept., 1890	. . . . .
A. S. Lang . . . . .	SW . .	7	68	June, 1888	400	360	20	15	. . .	Sept., 1890	. . . . .
John Wolff . . . . .	. . . .	8	68	Dec., 1885	410	335	120	80	. . .	Sept., 1890	. . . . .
J. H. Moser . . . . .	. . . .	9	68	July 24, 1888	494	460	60	120	. . .	Sept., 1888	. . . . .
Globe Sneller . . . . .	NE . .	15	68	May, 1886	505	500	173	100	. . .	Sept., 1890	. . . . .
D. A. Montagne . . . . .	. . . .	22	68	June 15, 1887	444	258	90	40	. . .	Sept., 1890	. . . . .
Smith Bros. . . . .	. . . .	23	68	June 1, 1885	360	. . .	. . .	. . .	. . .	. . . . .	. Diminished ⅓
B. & M. R. R. . . . .	NW . .	27	68	. . . . .	600	500	Did	. . .	Pump	Sept., 1890	400,000 gal. daily
The American House . . . . .	NE . .	33	68	Aug. 29, 1884	400	. . .	Did	. . .	10	Sept., 1890	. . . . .

## STATEMENT CONCERNING ARTESIAN WELLS—Continued.

NAME OF WELL, OR OWNER	LOCATION			DATE OF COMPLETION	Total depth of well in feet	Depth of prin- cipal flow	FLOW IN GAL. PER MINUTE		Depth from pumped	DATE OF LAST REPORT	REMARKS
	¼ Sec	T	S R W				At date of completion	At date of last re- port			
Zang Brewing Company . . . . .	NW . .	33	3	68	600	. . .	300	. . .	Pump	Sept., 1890	. . . . .
J. Q. Charles . . . . .	. . . .	34	3	68	600 ft.	flow.	Pressure about	7½	. . .	Jan., 1887	. . . Flow ceased
Barclay Block . . . . .	NW . .	34	3	68	602	. . .	40½	. . .	. . .	. . .	. . . . .
Windsor Hotel . . . . .	NW . .	34	3	68	998	735	208	15	. . .	Aug., 1884	. . . . . Pump
Daniels & Fisher . . . . .	. . . .	34	3	68	662	695	. . .	. . .	30	Sept., 1890	Raised 60' above surface.
Artesian Ice Co. . . . .	NW . .	4	4	68	636	600	70	Small	. . .	Sept., 1890	. . . . .
University Park . . . . .	. . . .	35	4	68	740	. . .	1-5	. . .	. . .	Sept., 1890	. . . . . Pump
Rosedale . . . . .	. . . .	27	4	68	627	620	11	7	. . .	Sept., 1890	. . . . .
Charles Moore . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	675	650	5	2	. . .	Sept., 1890	. . . . .
Thomas Skarrit . . . . .	. . . .	3	4	68	640	620	20	5	. . .	Sept., 1890	. . . . .
Adolph Caudler . . . . .	. . . .	4	5	68	650	530	15	25	. . .	Sept., 1890	. . . . .
Adolph Caudler . . . . .	. . . .	4	5	68	720	346	10	12	. . .	Sept., 1890	. . . . .
Bertha Magnes . . . . .	. . . .	4	5	68	806	560	4	12	. . .	Sept., 1890	. . . . .
Jacob Puff . . . . .	. . . .	4	5	68	500	500	15	10	. . .	Sept., 1890	. . . . .
William R. Smith . . . . .	. . . .	4	5	68	800	670	10	. . .	. . .	Sept., 1890	. . . . .

Charles E. Wyman	4	5	68	June, 1887	600	405	13	30	...	Sept., 1890	.....
Joseph Playter	5	3	68	Fall, 1885	550	500	16	6	pump	Sept., 1890	.....
A. W. Rucker	7	5	68	1884	630	630	30	6	...	Sept., 1890	.....
Cutler, Horn & Canney	11	3	68	1887	710	...	60	40	...	Sept., 1890	.....
J. B. Mayers (near R. R.)	16	3	68	...	375	350	35	25	...	Sept., 1890	.....
F. W. Shuckhart	16	5	68	July, 1886	600	550	20	10	...	Sept., 1890	.....
H. H. Shepard	16	5	68	Fall, 1888	570	490	10	2	...	Sept., 1890	.....
W. G. Sprague	16	3	68	Oct., 1880	540	520	20	6	...	Sept., 1890	.....
Stark Nursery Co., No. 7	16	3	68	June, 1888	720	670	15	3	...	Sept., 1890	.....
David Linhart	17	5	68	Fall, 1888	560	540	20	8	...	Sept., 1890	.....
J. B. Mayers, No. 2	17	5	68	July, 1885	510	475	25	25	...	Sept., 1890	.....
Chauncy Olmstead	17	5	68	Jan., 1887	510	360	20	8	...	Sept., 1890	.....
School District, Littleton	17	5	68	July, 1889	510	243	1	5	...	Sept., 1890	{ Flowed 30 for 2 years.
David Linhart	18	5	68	June, 1885	440	420	20	10	...	Sept., 1890	.....
Charles E. Hill	19	5	68	May, 1889	467	335	8	20	...	Dec., 1889	.....
R. J. Spotswood	19	5	68	Nov., 1887	297	...	25	30	...	May, 1890	.....
J. W. Barlow	20	5	68	April, 1884	378	378	7	4	...	Dec., 1889	.....
H. H. Curtis, Sr.	28	5	68	Dec., 1883	342	310	10	5	...	Sept., 1890	.....
H. H. Curtis, Jr.	28	5	68	1889	338	315	20	more	...	Sept., 1890	.....
Levi Palmer	29	5	68	Fall, 1883	360	285	20	9	...	Sept., 1890	.....
J. M. Fox	6	6	68	Dec., 1883	597	218	1	10	...	Sept., 1890	.....

## STATEMENT CONCERNING ARTESIAN WELLS—Concluded.

NAME OF WELL OR OWNER	LOCATION			DATE OF COMPLETION.	Total depth of well in feet	Depth of prin- cipal flow.	Flow in gal. per minute		Depth from which pumped	DATE OF LAST REPORT	REMARKS.
	$\frac{1}{4}$ Sec	T	S R W				At date of comple- tion.	At date of last re- port.			
J. H. Pearce, . . . . .	. . . .	34	6 68	Aug., 1883	442	440	10	30	. . .	Sept., 1890	. . . . .
Edward L. Chatfield . . . . .	NE . .	1	6 69	March, 1888	365	. . .	7	10	. . .	Sept., 1890	. . . . .
A. Latham . . . . .	. . . . .	. . . . .	. . . . .	July, 1890	740	720	15	7	. . .	Sept., 1890	. . . . .

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 1, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAMES OF CLAIMANTS
The Wadlin Ditch No. 3 . . . . .	Crow creek . . . . .	Dec. 4, 1888	Dec. 1, 1888	162.00	. . . . . J. M. G. Wadlin
The Melburn Ditch . . . . .	West Kiowa creek . . . . .	Dec. 26, 1888	Oct. 25, 1888	1.09	. . . . . John A. Melburn
The Brewer Ditch . . . . .	Bijou creek . . . . .	Feb. 21, 1889	Feb. 2, 1889	25.00	. . . . . W. A. Pratt
The Anx Ditch No. 1 . . . . .	Kiowa creek . . . . .	Feb. 21, 1889	Feb. 12, 1887	1.00	. . . . . Geo. Aux } included in one statement
The Aux Ditch No. 2 . . . . .	Kiowa creek . . . . .	Feb. 21, 1889	Mar. 1, 1887	1.00	. . . . . Geo. Aux }
The Schaffer Ditch . . . . .	Box Elder creek . . . . .	April 29, 1889	April 20, 1889	30.00	. . . . . Frank M. Schaffer
The Sled Ranch Ditch . . . . .	Big Beaver creek . . . . .	May 6, 1889	Feb. 2, 1889	21.00	. . . . . C. I. Lawton
The Beaver Ditch . . . . .	Beaver creek . . . . .	May 21, 1889	May 1, 1882	51.80	. . . . . The Beaver Ditch Company
The Beaver Creek Ditch . . . . .	Beaver creek . . . . .	July 18, 1889	April 18, 1889	157.00	. . . . . The Beaver Creek Ditch Company
The Bijou Res. & Canal Co's Canal	South Platte river, } Kiowa & Bijou ck }	July 18, 1889	Oct. 1, 1888	450.00	. . . . . The Bijou Reservoir and Canal Company
The A. A. Smith Irrig. Canals and Pipe Lines . . . . .	South Platte river } and Antelope crk }	Oct. 1, 1889	July 1, 1889	258.40	. . . . . A. A. Smith
The Corona Ranch Ditch . . . . .	South Platte . . . . .	Oct. 7, 1889	Nov. 16, 1886	10.00	. . . . . E. A. Van Wickler
The Gill Stevens & Co. Ditch . . . . .	South Platte . . . . .	Oct. 14, 1889	Sept. 3, 1889	52.00	. . . . . M. L. Stevens
The Beaver Farmers' } East ditch Canal & Ditch Co's } West ditch	{ Big Beaver creek }	Oct. 18, 1889	Sept. 9, 1889	202.50 100.00	{ The Beaver Farmers Canal and Ditch Company included in one statement.



## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAMES OF CLAIMANT'S
The P. H. Parsons Irrigat. Ditch.	Platte river	Dec. 4, 1889	Sept. 8, 1889	78.75	The P. H. Parsons Irrigating Ditch Company
The Sand Arroya Irrigating Ditch	Sand arroya	Dec. 17, 1889	Dec. 12, 1889	48.00	James W. McCreery
The Mauldin & Kruse Ditch	Running creek	Dec. 19, 1889	Sept. 17, 1889	2.65	James A. Mauldin and H. J. Kruse
The Darling Ditch	Wolf creek	Jan. 9, 1890	.....	65.00	Charles M. Darling
The Benck Ditch	East Bijou creek	Jan. 14, 1890	Sept. 15, 1889	48.00	August Benck
The Worth Brothers Ditch	Running creek	Jan. 14, 1890	June 9, 1888	5.21	Moses and Peter Worth
The Comanche Ditch	Comanche creek	Jan. 15, 1890	Dec. 2, 1889	13.50	Henry Nordloh
The Middle Bijou Ditch	Middle Bijou creek	Jan. 27, 1890	Aug. 1, 1889	42.00	Adams M. Fahringer
The Darlington Ditch	Kiowa creek	Mar. 4, 1890	Jan. 21, 1890	269.24	Charles W. Darling
The J. G. Smart Irrigating Ditch.	Bijou creek	Mar. 14, 1890	.....	.....	J. G. Smart
The H. H. Winger Ditch	Morrison creek	Mar. 17, 1890	Jan. 14, 1890	2.00	H. H. Winger
The Sanderson Ditch	East Bijou creek	April 22, 1890	April 1, 1890	14.40	John P. and Wm. P. Sanderson
Ditches of the Watkins Canal and Conduit Company	Box Elder, Terrapin and Station creeks	April 28, 1890	Jan. 27, 1890	22.00 22.00 22.00	The Watkins Canal and Conduit Company included in one statement.
The Fred Bachman Ditch No. 1.	Kiowa creek	May 14, 1890	Mar. 1, 1870	23.00	Fred Bachman
The Fred Bachman Ditch No. 2.	Kiowa creek	May 14, 1890	Mar. 20, 1881	23.00	Fred Bachman
The Fred Bachman Ditch No. 3.	Kiowa creek	May 14, 1890	July 3, 1882	23.00	Fred Bachman included in one statement.

Amended statement of The Fred Bachman Ditch No. 1 . . . . .	{ Kiowa creek . . . }	May 20, 1890	. . . . .	. . . . .	Fred Bachman
The Bijou Ditch . . . . .	East Bijou creek . .	June 4, 1890	Aug. 1, 1886	500.00	The Bijou Ditch Company
The Happy Thought Ditch . . . . .	Box Elder or Ter- rapin creek . . }	June 14, 1890	Mar. 10, 1890	56.00	The Watkins Consolidated Irrigation Company
The George A. Wood Ditch . . . . .	Kiowa creek . . .	Aug. 9, 1890	April 10, 1883	3.75	George A. Wood
The Joseph Oaks Ditch No. 1 . . . . .	Kiowa creek . . .	Oct. 21, 1890	June 10, 1886	4.50	Joseph Oaks

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 1, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Snow's (?) Reservoir . . . . .	East Bijou creek.	Bijou ditch . . . .	Feb. 14, 1889	Not stated	800,000	. . . . . Geo. A. Snow
Beaver Reservoir . . . . .	Bijou creek. . . . .	Beaver ditch . . . .	Feb. 24, 1889	Feb. 2, 1889	5,000,000	. . . . . W. A. Pratt
Darlington Reservoir No 1. . . . .	Kiowa creek . . . . .	Darlington ditch.	March 5, 1890	Jan. 21, 1890	977,836	} . . . Charles M. Darling
Darlington Reservoir No. 2 . . . . .	Kiowa creek . . . . .	Darlington ditch.	. . . . .	. . . . .	5,899,292	

*Water District No. 2*—Frank C. Albee, Commissioner; Platteville.

Mr. Albee reports for 1890, that he was called out April 12, and continued in service until October 31; total number of days, 203; that during this time J. W. Stockett was employed as assistant; that Frank Estes was employed 16 days and Wm. Brown 28 days guarding the head-gates of ditches nights to prevent the illegal diversion of water.

He further reports a greater scarcity of water during the season of 1890 in District No. 2 than ever before known; that the supply was not sufficient for ditches ante-dating 1865, and serious loss of crops has resulted therefrom.

This unusual scarcity is attributed to the diversion of water through post-dating ditches in Districts Nos. 4, 7 and 23, under the restraining orders of the courts, whereby the waters were distributed according to priorities in the districts mentioned and regardless of the division.

The orders referred to are more fully mentioned under the head of injunctions.

A statistical table for this district is herewith presented:

# COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION NO. 1—DISTRICT NO. 2.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1889 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
Burlington	31	6	50.81	17,462	405	.	.	350	.	.
Brantner	22	152	37.70	6,220	1,366	178	113	2,655	.	.
Brighton	8	170	22.22	3,511	525	89	1,153	885	.	.
Lupton Bottom	7	133	31.43	3,709	60	.	1,100	399	.	.
Platteville	12	193	47.88	3,154	550	70	120	200	.	.
Fulton	25	180	86.73	14,890	3,345	279	1,880	5,250	.	.
Side Hill	6	24	48.30	4,448	520	.	120	565	.	.
Leans No. 2	21	66	39.30	6,195	496	.	700	750	.	.
Clear Springs	2.50	.	.	750	.	.	.	.	.	.
Elwood or Wheeler	2.50	35	4	1,205	125	.	500	300	.	.
Beeman	7.50	61	43	2,233	391	.	300	937	.	.
Meadow Island No. 1	3	95	10	830	5	.	220	280	.	.
Meadow Island	2.50	103	11.27	320	40	.	90	105	.	.

Buckers . . . . .	13	35	49.11	3,895	1,188	10	. . . . .	956	. . . . .	. . . . .
Farmers' Independent . . . . .	11	112	27.88	9,944	1,585	. . . . .	300	1,919	. . . . .	. . . . .
Hewes and Cook . . . . .	3	77	6.76	600	50	. . . . .	210	75	. . . . .	. . . . .
J. Thomas . . . . .	1.25	203	3	900	. . . . .	. . . . .	740	70	. . . . .	. . . . .
Howe . . . . .	3.50	65	3.50	400	15	. . . . .	60	40	. . . . .	. . . . .
Big Bend . . . . .	2.50	129	6	175	14	. . . . .	20	100	. . . . .	. . . . .
Frederick Bros. . . . .	2.50	98	2.75	580	18	. . . . .	50	85	. . . . .	. . . . .
Union . . . . .	13	120	30.82	4,953	447	. . . . .	. . . . .	1,139	. . . . .	. . . . .
Section No. 3 . . . . .	4	130	15.40	850	15	17	80	317	. . . . .	. . . . .
Lower Latham . . . . .	20	190	37.70	15,000	2,127	20	2,465	4,313	. . . . .	. . . . .
Farmers' and Gardeners' . . . . .	3	207	3	1,200	32	23	. . . . .	102	. . . . .	. . . . .
Dugan . . . . .	3.25	107	5	500	68	18	126	116	. . . . .	. . . . .
Patterson . . . . .	2	60	3	930	20	. . . . .	400	10	. . . . .	. . . . .
Highland . . . . .	3.50	175	8	1,310	. . . . .	. . . . .	1,180	30	. . . . .	. . . . .
Wyatt . . . . .	1	147	2	300	40	. . . . .	100	100	. . . . .	. . . . .
* Loomis . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
* Mayfield . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
* Getz . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Totals in district . . . . .	236.50	. . . . .	636.55	103,548	13,447	704	13,227	23,028	600	51,006

\* Abandoned.



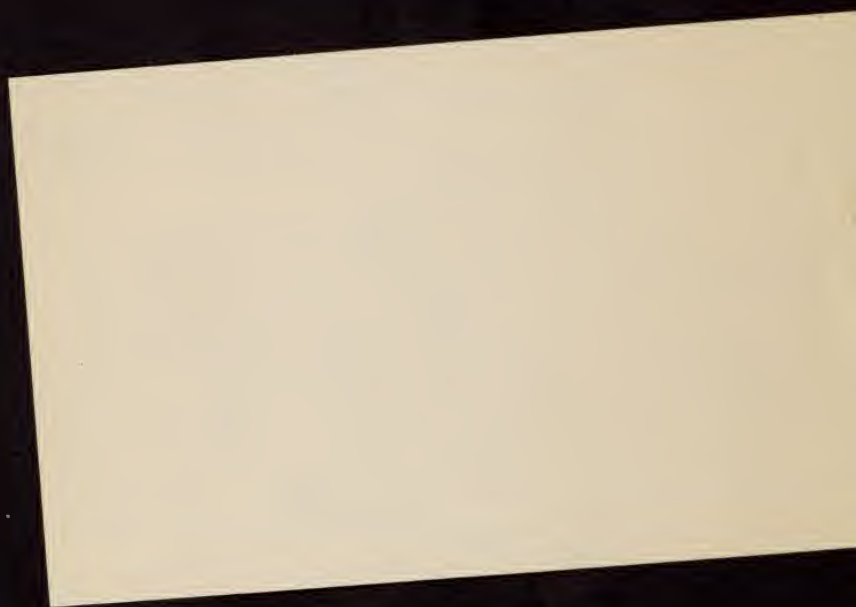
## STATEMENTS CONCERNING ARTESIAN WELLS

IN WATER DISTRICT NO. 2, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, AND FROM DATA FURNISHED BY PROF. L. G. CARPENTER, LOCAL OBSERVER FOR U. S. GEOLOGICAL SURVEY, AND NOT HERETOFORE PUBLISHED.

NAME OF OWNER OF WELL.	Total depth thereof	Diameter of case (in inches)	Length of case (in feet)	DEPTH OF FLOW BELOW SURFACE.				LOCATION	Present flow in Gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
Scranton . . . . .	800	3	600	. . .	. . .	. . .	. . .	Sec. 16, T. 3 S., R. 65 W.	. . .	. . . . .
A. E. Meek. . . . .	800	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 13, T. 1 S., R. 66 W.	. . .	Pump 25 feet, by windmill; 75 barrels per day.
Fred Milheim . . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 18, T. 1 S., R. 66 W.	1½	. . . . .
L. Haigus . . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 18, T. 1 S., R. 66 W.	1	. . . . .
J. M. Mumford . . . . .	446	2½	300	. . .	. . .	. . .	. . .	Sec. 31, T. 1 S., R. 66 W.	½	. . . . .
H. Damours . . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 6, T. 2 S., R. 66 W.	½	. . . . .
August Becker . . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 6, T. 2 S., R. 66 W.	4	. . . . .
Wm. F. Tietermann . . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 8, T. 2 S., R. 66 W.	½	. . . . .
Wm. Douglas. . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 18, T. 2 S., R. 66 W.	1	. . . . .
Arthur Barnes. . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 18, T. 2 S., R. 66 W.	2	. . . . .
H. B. Gilbert. . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 20, T. 2 S., R. 66 W.	1	. . . . .
Max Moore . . . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 24, T. 2 S., R. 66 W.	2½	. . . . .
F. A. Morse. . . . .	852	. . .	. . .	. . .	. . .	. . .	. . .	Sec. —, T. 2 S., R. 66 W.	25	. . . . .

### ERRATA.

Prof. L. G. Carpenter, of the State Agricultural College, at Fort Collins, who furnished a considerable portion of the data in relation to artesian wells, on pages 78 and 127, of this report, is "Field Agent, etc., in the Artesian Well Investigation of Department of Agriculture," under direction of R. J. Hinton, Washington, D. C., instead of in the U. S. Geological Survey, as given.



[illegible]

## STATEMENTS CONCERNING ARTESIAN WELLS—Continued.

NAME OF OWNER OF WELL.	Total depth thereof	Diameter of case (in inches)	Length of case (in feet)	DEPTH OF FLOW BELOW SURFACE				LOCATION.	Present flow in gallons, per minute	REMARKS.
				First flow	Second flow	Third flow	Fourth flow			
R. A. Southworth . . . . .	480	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 6, T. 2 S., R. 67 W. . .	4	. . . . .
A. Hauscome . . . . .	328	4	35	100	210	318	318	Sec. 8, T. 2 S., R. 67 W. . .	60	. . . . .
— Meyers . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 10, T. 2 S., R. 67 W. . .	2	. . . . .
W. F. Crocker . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 11, T. 2 S., R. 67 W. . .	5	. . . . .
George A. Starbird . . . . .	600	. . . .	580	180	350	580	600	Sec. 16, T. 2 S., R. 67 W. . .	40	. . . . .
Max More . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 20, T. 2 S., R. 67 W. . .	3	. . . . .
— Richardson . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 20, T. 2 S., R. 67 W. . .	34	. . . . .
D. H. & D. S. Pike . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 22, T. 2 S., R. 67 W. . .	10	. . . . .
L. C. Palmer . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 22, T. 2 S., R. 67 W. . .	8	. . . . .
— Klarer . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 24, T. 2 S., R. 67 W. . .	1	. . . . .
J. A. Hubbard . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 26, T. 2 S., R. 67 W. . .	3	. . . . .
Mrs. Cook . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 29, T. 2 S., R. 67 W. . .	12	. . . . .
Wm. Craig . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 30, T. 2 S., R. 67 W. . .	4	. . . . .
— O'Brien . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 30, T. 2 S., R. 67 W. . .	½	. . . . .
J. Rasmussen . . . . .	1	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	Sec. 30, T. 2 S., R. 67 W. . .	1	. . . . .

Mrs. C. H. Cook . . . . .	295	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 31, T. 2 S., R. 67 W.	60	. . . . .
Mrs. C. H. Cook . . . . .	531	. . . . .	485	. . . . .	531	Sec. 31, T. 2 S., R. 67 W.	10	. . . . .
Michel Soden . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 31, T. 2 S., R. 67 W.	1½	. . . . .
J. M. Mumford . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 31, T. 2 S., R. 67 W.	½	. . . . .
George A. Starbird . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 31, T. 2 S., R. 67 W.	4	. . . . .
— Vale . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 32, T. 2 S., R. 67 W.	2	. . . . .
F. P. Davis . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 36, T. 2 S., R. 67 W.	. . . . .	. . . . .
R. Bromle . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 36, T. 2 S., R. 67 W.	5	. . . . .
Wm. Craig . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 1, T. 3 S., R. 67 W.	¼	. . . . .
A. Chrissman . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 2, T. 3 S., R. 67 W.	1½	. . . . .
A. M. York . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 2, T. 3 S., R. 67 W.	2½	. . . . .
C. C. Towle . . . . .	561	3	225	220	460	550	50	. . . . .
D. P. Broadwell . . . . .	750	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 3, T. 3 S., R. 67 W.	10	. . . . .
D. P. Broadwell, No. 2 . . . . .	810	4½	98	. . . . .	. . . . .	Sec. 5, T. 3 S., R. 67 W.	. . . . .	Pump, 5 feet
J. M. Popenoe . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 5, T. 3 S., R. 67 W.	2	. . . . .
E. D. Fonda . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 7, T. 3 S., R. 67 W.	7	. . . . .
Unknown . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 7, T. 3 S., R. 67 W.	5	. . . . .
William Krates . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 7, T. 3 S., R. 67 W.	2	. . . . .
— Van Buren . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 9, T. 3 S., R. 67 W.	2	. . . . .
A. E. Resor . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 9, T. 3 S., R. 67 W.	1	. . . . .
J. L. Burns . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 13, T. 3 S., R. 67 W.	7	. . . . .
Ed. Bryant . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 13, T. 3 S., R. 67 W.	1½	. . . . .



## STATEMENTS CONCERNING ARTESIAN WELLS—Concluded.

NAME OF OWNER OF WELL.	Total depth thereof	Diameter of case (in inches)	Length of case (in feet)	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
J. C. Larcom . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 13, T. 3 S., R. 67 W . .	. . . . .	. . . . .
Unknown . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 13, T. 3 S., R. 67 W . .	. . . . .	. . . . .
C. H. Brand . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Shepherd's Addition . . .	2	. . . . .
Fish Hatchery . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Near Central Park . . . . .	25	. . . . .
County Poor Farm . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	North of Denver . . . . .	10	. . . . .
— Ebert . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 21, T. 3 S., R. 67 W . .	25	. . . . .
J. Cook, Jr. . . . .	1,069	$\left\{ \begin{array}{l} 5\frac{5}{8} \\ 2\frac{1}{2} \end{array} \right.$	723	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 25, T. 3 S., R. 67 W . .	. . . . .	. . . . .
Platte Land Co . . . . .	915	$\left\{ \begin{array}{l} 3\frac{1}{2} \\ 2\frac{1}{2} \end{array} \right.$	790	713	798	. . . . .	. . . . .	Sec. 1, T. 4 S., R. 67 W . . .	. . . . .	. . . . .
Louis Dugal . . . . .	770	. . . . .	. . . . .	350	500	770	. . . . .	Sec. 6, T. 4 S., R. 67 W . . .	. . . . .	Pump 70 feet
East Capital Hill . . . . .	715	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 7, T. 4 S., R. 67 W . . .	. . . . .	. . . . .
Bush & Morse . . . . .	1,103	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 15, T. 4 S., R. 67 W . . .	. . . . .	. . . . .
Thomas B. Croke . . . . .	630	5 $\frac{5}{8}$	630	. . . . .	. . . . .	. . . . .	. . . . .	SE. $\frac{1}{4}$ , sec. 10, T. 2 S., R. 68 W	60	. . . . . By pumping 18 feet
A. Stedman . . . . .	325	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 24, T. 2 S., R. 68 W . . .	3	. . . . .
D. A. Ranslin . . . . .	399	4 $\frac{1}{2}$	49	238	376	. . . . .	. . . . .	Sec. 3, T. 3 S., R. 68 W . . .	60	. . . . .
J. H. Moser . . . . .	494	3	50	140	245	425	494	Sec. 9, T. 3 S., R. 68 W . . .	60	. . . . .

Globe Smelter . . . . .	595	. . . . .	. . . . .	300	465	500	. . . . .	Sec. 15, T. 3 S., R. 68 W . .	100	. . . . .	Flows freely from 1½ inch opening.
Smith Brothers . . . . .	360	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 23, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump
Denver Electric Co . . . . .	629	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 27, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump
B. & M. R. R. . . . .	600	4 to 9	90	225	350	500	. . . . .	Sec. 27, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump
U. P. R. R. . . . .	634	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 27, T. 3 S., R. 68 W . .	80.	. . . . .	Pump 150 feet
Anheiser Company . . . . .	604	4	314	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 33, T. 3 S., R. 68 W . .	. . . . .	. . . . .	. . . . .
American House . . . . .	545	5½ 4¾	400 545	400	545	. . . . .	. . . . .	Sec. 33, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump
Zang Brewing Co . . . . .	600	9 20 5½	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 33, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump
Excelsior Laundry . . . . .	609	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 33, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump 20 feet
Donald Fletcher . . . . .	904	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 34, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump 50 feet
Daniels & Fisher . . . . .	662	6½ 10	30	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 34, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Pump 30 feet
Windsor Hotel . . . . .	997	5½ 7½ 3½	497 735 284	177	437	530	735	Sec. 34, T. 3 S., R. 68 W . .	85	. . . . .	By pumping
Barclay Block . . . . .	602	5½ 4¾	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 34, T. 3 S., R. 68 W . .	7½	. . . . .	Jan. 17, 1887, last report
W. H. McClelland . . . . .	200	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 34, T. 3 S., R. 68 W . .	. . . . .	. . . . .	Said to be abandoned

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 2, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAMES OF CLAIMANTS
The Adolph Schinner Ditch . . . .	Coal creek . . . . .	Dec. 28, 1888	Oct. 15, 1888	45.00	. . . . . Adolph Schinner
The Adolph Schinner Ditch No. 2 .	Coal creek . . . . .	Dec. 28, 1888	Dec. 15, 1888	8.00	. . . . . Adolph Schinner
The Frey Tunnel Ditch . . . . .	Senack creek . . . . .	Mar. 7, 1889	Mar. 2, 1889	18.00	. . . . . George Frey
The Reithman Brothers Ditch. . .	Second creek . . . . .	Mar. 25, 1889	Mar. 4, 1889	18.00	. . . . . Emile and Fred. Reithman
The Hudson Ditch No. 1. . . . .	Burlington ditch . .	April 9, 1889	Feb. 1, 1889	56.40	. . . The Hudson Ditch and Reservoir Company
The Hudson Ditch No. 2. . . . .	Burlington ditch . .	April 9, 1889	Feb. 1, 1889	56.40	. . . The Hudson Ditch and Reservoir Company
Feeder No. 1 to Beaver Lake Ditch	Not given . . . . .	June 5, 1889	Mar. 4, 1889	60.00	. . . . . The Beaver Lake Ditch Company
The Coal Creek Ditch & Res. Line	Coal creek . . . . .	Sept. 11, 1889	Aug. 29, 1889	20.00	. . . . . J. J. Lichter
Extension Ditch to Feeder No. 1 } to Beaver Lake Ditch . . . . }	Not given . . . . .	Sept. 16, 1889	Sept. 9, 1889	150.00	. . . . . The Beaver Lake Ditch Company
The Loustano Ditch . . . . .	Coal creek . . . . .	Sept. 18, 1889	Aug. 7, 1889	21.50	. . . . . J. J. Crippen
The Heller Ditch . . . . .	Platte river . . . . .	Oct. 16, 1889	Oct. 9, 1889	1.50	. . . . . David Heller
The Cactus Hill Ditch . . . . .	Second creek. . . . .	. . . . .	Sept. 9, 1886	78.83	. . . . . Not stated
The Big Dry Creek Ditch . . . .	Big Dry creek . . . .	Feb. 4, 1890	Dec. 15, 1889	32.60	. . . . . D. S. Thompson <i>et al.</i>
The First Creek Ditch. . . . .	First creek . . . . .	Mar. 11, 1890	Feb. 14, 1890	47.80	. . . The First Creek Land and Improvement Co.
The Schultz Ditch. . . . .	South Platte river .	Mar. 14, 1890	Jan. 1, 1889	37.00	. . . . . W. C. Schultz

THE SCHULZ DITCH.		SOUTH PLATTE RIVER.		MAY. 14, 1890.		JAN. 1, 1889.		W. C. SCHULZ.	
The Meadow Spring Ditch. . . . .		Meadow Sp. stream		Mar. 26, 1890	Mar. 25, 1890	6.00		Mrs. J. H. Lawrence and Wm. McCann	
The W. Z. Hallam Irrigat'g Ditch		Springs . . . . .		April 29, 1890	April 1, 1875	7.50		. . . . . N. Z. Hallam	
The Burlington Ditch . . . . .		South Platte river .		May 7, 1890	Dec. 10, 1886	329.50		. . . . . The Burlington Ditch Company	
The First Drain Ditch of the } Lower Latham Ditch . . . . .		South Platte river .		July 22, 1890	May 7, 1890	209.00		. . . . . The Lower Latham Ditch Company	
The Meek Lateral Ditch. . . . .		South Platte river .		Aug. 12, 1890	May 14, 1890	9.50		. . . . . A. E. Meek	
Unnamed . . . . .		Waste and seepage		} Sept. 10, 1890	August, 1887	1.00		} . . . . . W. W. Pardee	
Unnamed . . . . .		Waste and seepage			Sept. 6, 1890	1.00		}	
Unnamed . . . . .		Reservoir in Sec. 6			Aug. 18, 1890	1.00		}	

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT NO. 2, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Hudson Reservoir 1 N. 66 . .	South Platte . . . . .	Burlington . . . . .	April 9, 1889	Feb. 1, 1889	1,800,800	The Hudson Ditch & Reservoir Company
The Hudson Reservoir 2 N. 65 . .	South Platte . . . . .	Burlington . . . . .	April 9, 1889	Feb. 1, 1889	792,000	
Dry Creek Reservoir . . . . .	Little Dry Creek . . . . .	On the Stream . . . . .	May 18, 1888	May 4, 1888	Not stated	. . . . . J. D. Hooper
Twin Reservoirs . . . . .	South Platte . . . . .	Burlington . . . . .	Feb. 4, 1890	Dec. 4, 1889	3,920,400	. . . . . Curtis & Brown
Willis Reservoir No. 1 . . . . .	Springs and Seepage } on Big Dry Creek }	On Big Dry Creek . . . . .	Feb. 8, 1890	Jan. 22, 1890	180,000	. . . . . C. N. Willis
Willis Reservoir No. 2 . . . . .			Feb. 8, 1890	Jan. 22, 1890	480,000	
Clark Reservoir . . . . .	Big Dry Creek . . . . .	Big Dry Creek Ditch . . . . .	Feb. 21, 1890	Dec. 18, 1889	7,541,340	. . . Lawrence G. Clark
Thompson Reservoir . . . . .	Big Dry Creek . . . . .	Big Dry Creek Ditch . . . . .	Feb. 21, 1890	Dec. 18, 1889	9,801,792	D. S. & C. A. Thompson
Reservoir on 21 and 28, 1. N. 66 W. {	South Platte . . . . .	Burlington . . . . .	May 19, 1890	Jan. 28, 1890	13,068,000	. . . . . Not stated
Christineck Reservoir . . . . .	Dry Creek in Dist. No. 2 Clear Creek in Dist. No. 7	{ German Farmers High Line }	Sept. 5, 1890	{ . . . . ., 1888 Aug. 18, 1890 }	{ 4,000,000 }	. . . Louis A. Christineck
Unnamed . . . . .	Waste and Seepage . . . . .		Sept. 10, 1890	Sept. 6, 1890	{ . . . . . }	. . . . . W. W. Pardee
Unnamed . . . . .	Waste and Seepage . . . . .	Built in Gulch . . . . .				
Unnamed . . . . .	Waste and Seepage . . . . .	Built in Gulch . . . . .				

*Water District No. 3*—B. S. La Grange, Commissioner for 1889, Greeley, Weld county; J. L. Armstrong, Commissioner for 1890, Fort Collins, Larimer county.

No report was received from this district for the year 1889.

For 1890, Mr. Armstrong reports 139,222 acres irrigated from ditches and 10,825 acres from stored water. For details as to crops, see tabulated statement. Mr. Armstrong took charge of the district July 11, 1890, in the midst of the irrigating season, and was unable from lack of data prior thereto to make as complete a statement as he desired.



## COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION No. 1—DISTRICT No. 3.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated from reservoirs
The Dry Creek Ditch . . . . .	12	300	25	2,600	676	. . . . .	629	1,013	300	. . .
The Pleasant Valley and Lake Canal .	18	200	50	6,700	2,500	500	800	2,900	300	600
The Pioneer Ditch . . . . .	3	95	10	1,050	145	. . . . .	750	155	. . .	. . .
The Boyd and Freeman Ditch . . . .	3.50	230	7	1,440	150	130	800	300	. . .	. . .
The Whitney Ditch . . . . .	8	185	15	1,200	150	20	400	500	50	. . .
The B. H. Eaton Ditch . . . . .	3.50	250	5	1,000	25	. . . . .	900	20	. . .	. . .
The Larimer and Weld Canal . . . .	64	191	107.50	45,000	5,000	. . . . .	4,000	28,000	1,500	600
The John G. Coy Ditch . . . . .	2	275	4	270	40	40	145	45	. . .	. . .
The John R. Brown Ditch . . . . .	1	80	4	280	6	. . . . .	140	120	40	. . .
The Box Elder Ditch . . . . .	4.75	187	6.50	2,245	207	35	1,345	251	800	. . .
The Chamberlain Ditch . . . . .	.75	250	2.50	100	20	. . . . .	15	50	20	. . .
The Taylor and Gill Ditch . . . . .	1	240	1.50	300	20	. . . . .	80	170	75	. . .
The Wm. R. Jones Ditch . . . . .	2	150	5	500	20	10	425	20	. . .	. . .

The Josh Ames Ditch . . . . .	1.75	215	4	800	100	20	350	250	100	. . .
The Martin Calloway Ditch . . . . .	2	65	3	350	2	. . . . .	150	17	. . . . .	. . .
The N. and P. Bristol Ditch No. 1 . .	.75	300	4	75	28	. . . . .	39	8	. . . . .	. . .
The Cañon Canal . . . . .	2.50	180	2	240	200	. . . . .	10	30	. . . . .	. . .
The Cache la Poudre Irrigating Ditch	3.50	300	17	1,500	250	50	540	560	. . . . .	. . .
The Fort Collins Canal . . . . .	6	200	10	2,570	1,020	140	100	1,310	400	400
The New Mercer Ditch . . . . .	13	187	24	6,700	720	150	250	5,175	100	250
The N. and P. Bristol Ditch No. 2 . .	2	300	4	320	35	. . . . .	235	50	. . . . .	. . .
The Union Colony Canal No. 3 . . . .	10	200	45	6,000	250	25	1,500	2,000	. . . . .	. . .
Cache la Poudre Irrigating Co.'s Ditch	30	213	160	26,800	8,500	. . . . .	800	17,500	400	2,500
The Burnham and Emerson Ditch . .	1.25	200	1.50	35	27	. . . . .	3	5	. . . . .	. . .
The Wm. Calloway Ditch No. 1 . . . .	.50	40	1	80	. . . . .	. . . . .	40	40	. . . . .	. . .
The Chaffee Ditch . . . . .	2.50	90	3	375	30	. . . . .	240	100	100	. . .
The Lake Canal . . . . .	14	156	52	8,700	1,300	100	700	5,900	400	. . .
The W. S. Taylor Ditch . . . . .	.75	40	1.50	100	35	. . . . .	. . . . .	65	35	. . .
The Larimer County Canal No. 2 . . .	12	175	47	8,000	1,850	475	375	4,800	400	940
The Aquilla Morgan Ditch . . . . .	.50	30	1.50	100	. . . . .	. . . . .	80	. . . . .	. . . . .	. . .
The Brown Ditches Nos. 1 to 7 . . . .	2	185	1.75	240	. . . . .	25	160	30	. . . . .	. . .
The Sturdevant Ditches Nos. 1 and 2	2	200	1	75	1	. . . . .	72	2	. . . . .	. . .
The Vandewark Ditch . . . . .	.65	28	2	100	15	. . . . .	55	26	30	. . .
The Mitchell & Weymouth Ditch No. 1	1.25	30	1.50	60	10	. . . . .	50	. . . . .	. . . . .	. . .
The Boyd, George and S., Ditch . . . .	1.50	200	2	200	10	16	150	22	. . . . .	. . .

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated from reservoirs
The Wm. Calloway Ditch No. 2 . . . . .	.67	50	2	240	. . . . .	. . . . .	. . . . .	75	. . . . .	. . . . .
The Wetzler Ditch . . . . .	1.25	35	2	160	5	. . . . .	. . . . .	8	. . . . .	. . . . .
The Kitchell & Ladd Ditch . . . . .	1.75	185	2.50	220	14	. . . . .	. . . . .	60	. . . . .	. . . . .
The A. Washburn Ditches Nos. 1 and 2.	1.75	185	3	150	4	4	136	6	4	. . . . .
The Roberts Ditch No. 1 . . . . .	.67	25	1.50	60	. . . . .	. . . . .	. . . . .	5	. . . . .	. . . . .
The Box Elder Res. Co.'s Ditch. . . . .	8.50	30	3	3,000	25	. . . . .	. . . . .	10	. . . . .	35
The McNey & Chace Ditch . . . . .	.50	45	.50	60	8	. . . . .	. . . . .	7	. . . . .	. . . . .
The Fisk Ditch No. 2 . . . . .	.33	30	2	80	5	5	70	. . . . .	30	. . . . .
The Mitchell & Weymouth Ditch No. 2.	2.25	35	4	300	5	. . . . .	. . . . .	35	. . . . .	. . . . .
The North Poudre Canal . . . . .	20	60	90	20,000	300	. . . . .	. . . . .	2,500	. . . . .	2,000
The Chase Ditch . . . . .	.67	50	2	100	. . . . .	10	20	50	20	. . . . .
The Larimer County Ditch . . . . .	70	63	200	37,000	2,280	. . . . .	790	11,570	. . . . .	3,500
The Emerson Bros. Ditch. . . . .	2	40	6	220	40	. . . . .	170	10	. . . . .	. . . . .
The Ogilvy Ditch . . . . .	6	275	10	4,000	600	100	400	275	. . . . .	. . . . .

The Poudre High-Line Canal. . . . .	5	60	8	560	130	. . . . .	. . . . .	. . . . .	170	. . . . .	. . . . .
The Arthur Lateral Ditch. . . . .	3	150	3	*	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Virginia Dale Ditch . . . . .	1.50	100	.50	20	. . . . .	. . . . .	. . . . .	. . . . .	10	. . . . .	. . . . .
The Woodruff Ditches Nos. 1 to 3. . . .	1	180	1	60	. . . . .	. . . . .	. . . . .	. . . . .	20	. . . . .	. . . . .
The Aldrich Ditch . . . . .	.50	40	.75	40	. . . . .	. . . . .	. . . . .	. . . . .	40	. . . . .	. . . . .
The Emerson Bros. Ditch No. 2. . . . .	.40	15	2	20	. . . . .	. . . . .	. . . . .	. . . . .	20	. . . . .	. . . . .
The Luke Landers Ditch . . . . .	.75	45	2.50	160	10	. . . . .	. . . . .	. . . . .	148	. . . . .	. . . . .
The Bristol Ditch No. 3. . . . .	3.25	. . .	. . . . .	600	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Christman Ditches Nos. 1 and 2. .	1.50	200	.50	110	8	. . . . .	. . . . .	. . . . .	80	. . . . .	. . . . .
The Kibler Ditches Nos. 1 to 4. . . . .	3	200	.50	100	4	. . . . .	. . . . .	. . . . .	40	. . . . .	. . . . .
The Murchland Ditch. . . . .	.25	150	.50	15	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .	. . . . .
The Gealow Ditch. . . . .	.25	80	.50	10	. . . . .	. . . . .	. . . . .	. . . . .	2	. . . . .	. . . . .
The Pillman Ditch . . . . .	.50	100	.50	50	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .	. . . . .
Totals in District . . . . .	351.14	. . .	981.50	193,440	26,780	1,926	19,042	86,370	5,104	10,825	

\* Areas given under Ft. Collins canal.

Total number of acres irrigated in District, 139,222.

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 3, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888 TO DECEMBER 1, 1890; AND NOT HERETOFORE PUBLISHED.

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons per minute	REMARKS.
				First flow	Second flow	Third flow	Fourth flow			
Greeley public well . . . . .	2,300	...	...	1,200	...	...	...	Sec. 5, T. 5 N., R. 65 W.	1½	...
Not known . . . . .	2,140	...	...	1,165	...	...	...	Sec. —, T. 5 N., R. 65 W.	%	Temperature 63°
Greeley Artesian Well Co., No. 2 . .	1,250	3	...	90	1,070	1,137	...	Sec. 5, T. 5 N., R. 65 W.	...	...
B. H. Eaton . . . . .	970	...	...	...	...	...	...	Sec. 31, T. 5 N., R. 65 W.	...	Pump 18 feet
R. Loveland . . . . .	350	6	250	...	...	...	...	Sec. 12, T. 5 N., R. 65 W.	...	Pump 18 feet

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 3, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Avery Ditch No. 1 . . . . .	Box Elder Creek .	Dec. 8, 1888	Dec. 5, 1888	1,000 cu. in.	Wm. H. Avery
The Avery Ditch No. 2 . . . . .	Box Elder Creek .	Dec. 8, 1888	Dec. 5, 1888	500 cu. in.	Wm. H. Avery
The Avery Ditch No. 3 . . . . .	Box Elder Creek .	Dec. 8, 1888	Dec. 5, 1888	800 cu. in.	Wm. H. Avery
The Oliver Sand Creek Ditch . .	Sand Creek . . .	June 7, 1889	May 6, 1889	5.00	William H. Oliver
The Coral Rock Ranch Ditch No. 1	Elkhorn Creek . .	June 27, 1889	Spring of 1889	1.00	John Pearce
The Coral Rock Ranch Ditch No. 2	Elkhorn Creek . .	June 27, 1889	1886	1.50	John Pearce
The Coral Rock Ranch Ditch No. 3	Elkhorn Creek . .	June 27, 1889	1887	1.00	John Pearce
The John Ayres Ditch . . . . .	Elkhorn Creek . .	July 15, 1889	Spring of 1883	1.00	John Ayres
The J. W. Warren Irrigation Ditch	Flood, seepage, etc	Sept. 16, 1889	July 1, 1887	7.70	John W. Warren
The Bardwell & Wathen Irri. Ditch	Horse Tooth Gulch	Oct. 2, 1889	July 6, 1889	2.77	Stephen A. Wathen
The W. S. Mason Ditch . . . . .	Draw not named .	Nov. 29, 1889	Oct. 6, 1889	3.59	W. S. Mason
The Tunni & Dowdy Lake Res. Ditch	Elkhorn Creek . .	Dec. 5, 1889	Oct. 5, 1889	17.50	Isaac Phillips, <i>et al</i>
The Douglas Ditch . . . . .	Dry Creek . . . .	Dec. 6, 1889	Sept. 2, 1889	6.00	John Douglas



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAMES OF CLAIMANTS
The Dionysius Mantez Ditch No. 1	Lone Tree Creek.	Feb. 24, 1890	April 15, 1882	26.00	Dionysius Mantez
The Dionysius Mantez Ditch No. 2	Lone Tree Creek.	Feb. 24, 1890	April 15, 1882	10.00	
The Dionysius Mantez Ditch No. 3	Lone Tree Creek.	Feb. 24, 1890	April 15, 1882	23.00	
The Dionysius Mantez Ditch No. 4	Lone Tree Creek.	Feb. 24, 1890	April 15, 1882	6.00	
The Dionysius Mantez Ditch No. 5	Lone Tree Creek.	Feb. 24, 1890	April 15, 1882	6.00	R. D. Law
The Dionysius Mantez Ditch No. 6	Lone Tree Creek.	Feb. 24, 1890	April 15, 1882	5.00	
The Ireland Ditch . . . . .	Larimer & Weld C'n'l	Mch. 20, 1890	March, 1889	49.45	
The Hardscrabble Ditch . . . . .	East Draw Spring	May 12, 1890	Oct. 1, 1884	144.00	
The Feeder to the Highland Res.	Cache la Poudre C'n'l	Sept. 2, 1890	Aug. 25, 1890	75.00	The Highland Valley Reservoir & Ditch Company
The Windsor Canal . . . . .	Cache la Poudre .	Oct. 9, 1890	July 8, 1890	103.12	The Windsor Reservoir & Canal Company
The Lavery Ditch . . . . .	Dry Creek . . . .	Nov. 22, 1890	May 20, 1890	19.00	Charles W. & Mora G. Lavery

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 3, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Mitchell Reservoir . . . . .	S. Fork of N. Pine	Mitchell Ditch . .	Aug. 24, 1889	Not stated	14,754,930	. . . . . Jacob Mitchell
Box Elder Cañon Reservoir . . . . .	Box Elder Creek	On the stream . .	Jan. 25, 1889	Not stated	Not given	John E. & Ellis H. Roberts
Botsford Reservoir . . . . .	Cache la Poudre .	Larimer Co. ditch	Oct. 15, 1889	Sept. 11, 1889	2,600,000	. . . . . Milton Botsford
Chase-King Reservoir . . . . .	Cache la Poudre .	Larimer Co. ditch	Nov. 6, 1889	Oct. 7, 1889	6,309,666	. . . . . Howard Chase <i>et al</i>
Twin Lakes Reservoir . . . . .	Elkhorn & S. Pine	Feeder ditch . . .	Dec. 5, 1889	Oct. 5, 1889	{ 3,526,481 31,654,810	{ . . . . . Isaac Phillips <i>et al</i>
Dowdy Reservoirs . . . . .						
Dionysius { No. 1 }	Lone Tree Creek	{ Dionysius Mantey ditches { No. 1 No. 2	Feb. 24, 1890	April 15, 1882	{ 157,500 38,004 356,400.	{ . . . . . Dionysius Mantey
Mantey's { No. 2 }						
Reservoirs { No. 3 }						
Highland Reservoir . . . . .	Cache la Poudre .	{ Cache la Poudre Irrigating can'l }	Sept. 7, 1890	Aug. 25, 1890	8,709,083	{ The Highland Reservoir & Ditch Company.
Windsor Reservoir . . . . .	Cache la Poudre .	Larimer & Weld	Oct. 9, 1890	July 8, 1890	124,229,552	{ The Windsor Reservoir & Canal Company.

*Water District No. 4*—Wm. A. Bean, Commissioner, Loveland, Larimer county.

Mr. Bean reports for 1890, a shortage of water during the cold spell in June, but a supply sufficient for all practical purposes, from the twentieth of July to the close of the season.

Eighty-nine thousand seven hundred and ninety acres were irrigated from ditches, and about twelve thousand acres from reservoirs.

# COMMISSIONER'S REPORT, A. D. 1890, DIVISION No. 1—DISTRICT No. 4.

## STATE ENGINEER.

97

NAME OF DITCH	Length thereof in miles	Number of days water was car- ried therein	Average amount of water carried during season of 1890 in cubic feet per second	Number of acres that can be ir- rigated there- from	Number of acres of alfalfa irri- gated there- from	Number of acres seeded grasses other than al- falfa irrigated therefrom	Number of acres of natural grasses irri- gated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage
Handy . . . . .	25	173	46½	15,722	1,270	147	5,372	8,933	•
Home Supply . . . . .	36	120	23	15,940	1,000	200	2,319	12,800	•
South Side . . . . .	10	134	16	1,365	100	•	365	1,000	•
Louden . . . . .	20	176	77	15,500	500	150	500	14,350	•
George Rist . . . . .	8	52	41	5,000	200	100	1,700	2,000	•
Barnes, Branch & Greeley . . . . .	6	180	26	2,140	150	70	980	1,040	•
Loveland & Greeley . . . . .	26	200	111	17,390	900	•	7,490	9,000	•
Big Thompson, No. 2 . . . . .	3½	200	40	1,500	200	•	700	600	•
Farmers . . . . .	12	160	24	2,000	150	20	260	1,564	•
Big Thompson, No. 5 . . . . .	3½	200	20	1,000	70	30	800	100	•
Hillsborough . . . . .	12	152	80	8,000	400	150	260	7,250	•
Big Thompson, No. 1 . . . . .	7	180	10	2,160	300	40	1,100	720	•
Hill & Brush . . . . .	3	60	20	1,000	•	•	400	600	•
Big Thompson and Platte River . . . . .	4	200	30	1,500	200	50	700	550	1,000
	176	•	564.50	90,217	5,440	957	22,886	59,507	1,000

Total number of acres irrigated in District, 89,790.

# STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 4, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
Town of Loveland . . . .	2,465	. . . .	. . . .	1,365	. . . .	. . . .	. . . .	Sec. 13, T. 5 N, R. 69 W . . . .	. . . .	. . . .

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 4, RELATIVE TO WHICH STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT.
The Dry Creek Ditch . . . . .	Dry creek . . . . .	Jan. 2, 1889	Nov. 19, 1888	1.84	. . . . . Pat. O'Hara
The Parsons High Line Ditch . . . . .	Parsons' gulch . . . . .	Mar. 26, 1889	Mar. 1, 1889	5.20	. . . . . A. Parsons
Enlargement and extension of the Neville Ditch . . . . .	Buckhorn creek . . . . .	June 14, 1889	Oct. 1, 1888	8.72	. . . . . George A. Galucia <i>et al.</i>
The Buckingham Ditch . . . . .	Ryan's gulch . . . . .	July 19, 1889	May 4, 1889	22.86	. . . . . Charles G. Buckingham
Not named . . . . .	{ N. branch Ryan's } gulch . . . . .	July 26, 1889	April 27, 1889	12.66	. . . . . Percy D. Goss
The Badger Ditch . . . . .	Dry creek . . . . .	Aug. 13, 1889	April 25, 1884	8.33	. . . . . William S. Warren and Charles Emerson
The Thompson Ditch . . . . .	Buckhorn creek . . . . .	Dec. 3, 1889	May, 1886	7.81	. . . . . E. J. Thompson <i>et al.</i>
Hyatt's Individual Ditch . . . . .	Buckhorn creek . . . . .	Dec. 3, 1889	October, 1887	3.65	. . . . . H. F. Hyatt
The Ditch of the Union Irrigating Ditch and Reservoir Co. }	Buckhorn creek . . . . .	Dec. 6, 1889	Nov. 27, 1889	13.60	. . . . . The Union Irrigating Ditch and Reservoir Co.
The Buckhorn High Line Ditch . . . . .	Buckhorn creek . . . . .	Feb. 24, 1890	Oct. 22, 1883	11.10	. . . . . J. O. Talley <i>et al.</i>
The Neville Ditch . . . . .	Buckhorn creek . . . . .	Feb. 28, 1890	Nov. 30, 1889	12.60	. . . . . Edward Neville
The Second Extension of the Neville Ditch . . . . .	Buckhorn creek . . . . .	May 1, 1890	Feb. 1, 1889	3.78	. . . . . Jos. E. Neville
Enlargement of the Victoria Canal	Not stated . . . . .	July 19, 1890	May 1, 1887	Not stated	. . . . . The Victoria Irrigating Canal Company
The Big Cut Lateral . . . . .	{ The Loveland & } { Greeley Ir. canal }	July 30, 1890	Not given	49.28	. . . . . The Big Cut Lateral and Reservoir Company



## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 4, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Welch Reservoirs	Big Thompson Creek..	Handy .....	Jan. 20, 1890	Oct. 1886	128,000,000	..... C. C. Welch
				Oct. 1886	18,000,000	
				Dec. 27, 1889	39,000,000	
				Dec. 27, 1889	20,000,000	
				Oct. 1886	400,000	
Beasley Reservoir.....	Big Thompson Creek .	Handy .....	Mar. 29, 1890	Oct. 1, 1881	8,000,000	Hannah A. Dobbins, Adm'r
The Boulder and Larimer County Irrigating and Manufacturing Ditch Company's Reservoir	Little Thompson Creek.	Company's Ditch...	May 1, 1890	Feb. 3, 1890	Not stated	{ The Boulder and Larimer County Irrigating and Manufacturing Company
	Big Thompson Creek..	{ Loveland and Greeley Irrigat. Canal	July 30, 1890	Not given ..	49,762,944	
Big Cut Reservoir .....	Big Thompson Creek..	{ Loveland and Greeley Irrigat. Canal	July 30, 1890	Not given ..	49,762,944	{ The Big Cut Lateral and Reservoir Company

# STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT NO. 4, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON		Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
Sec.	T. S. R. W.								
12	5	69	45	60	8	.....	.....	Irrigation	Big Thompson creek
1	6	69	50	.....	12	.....	.....	.....	Big Thompson creek
30	6	68	69	.....	3	.....	.....	Irrigation	Big Thompson creek
11	5	69	640	.....	.....	.....	.....	.....	Big Thompson creek
15	5	69	380	1,100	20	\$ 10,000 00	.....	Irrigation	Big Thompson creek
32	5	68	1,200	.....	.....	.....	.....	.....	Big Thompson creek
4	4	68		.....	Natural *	.....	.....	.....	Big Thompson creek
32	5	68	73	.....	.....	.....	.....	Irrigation	Big Thompson creek
4	4	69	540	.....	.....	.....	.....	Irrigation	Big Thompson creek

\* Greatest depth sixty four feet. Used for breeding fish.

*Water District No. 5*—J. W. Daniels, Commissioner, Longmont, Boulder County.

Mr. Daniels reports for 1889, that he was called out April 22, to divide water for domestic use, there being a very small supply in the stream.

May 10, a heavy fall of snow in the mountains, and rain in the valley afforded an abundant supply for all purposes until late in the season, when the scarcity of water and interference with the head-gates rendered it necessary to place locks on all gates. An assistant was employed for 97 days during the season. He further reports the season a very prosperous one for all the agricultural interests.

For 1890, he was called out March 25, and found very little water to divide, nor was there a supply sufficient for all ditches at any time during the season. An unusually large acreage of grain was sown in anticipation of an abundant water supply, as the result of the supposed heavy snow-fall in the mountains during the preceeding winter, but the water failing to materialize, the grain crop necessarily suffered in many localities. Heavy rain-falls later in the season, afforded a good supply for hay, crops and storage purposes. Two assistants were employed, one for 107 days to aid in the distribution of water to the ditches, and a second to patrol the district and enforce the economical use of water among the consumers.

Mr. Daniels further reports 2,854.44 cubic feet per second decreed to ditches in his district, this quantity being nine times the average discharge of St. Vrain creek during the irrigating season; that a large proportion of the ditches have been enlarged one or more times since the adjudication took place, and still have not the capacity to carry the decrees; that the earlier ditches to which water was decreed in sufficient quantity

to drain the stream in its ordinary stages do not cover to exceed 3,000 acres of land.

He recommends a re-adjudication of water rights, that the date of priority should correspond to the date of application of water to the land, and the quantity should be limited to the necessities of the land actually cultivated, and further, the quantity of water decreed should be limited to the average discharge of the stream, plus the probable amount that can be stored in reservoirs, further rights being granted as the water supply increased.

He further recommends that Water Commissioners should have control over the lines of ditches and the Superintendents of ditches, the better to regulate the distribution of water among consumers, and insure its economical use.

Mr. Daniels is to be commended for the completeness of his report in its details.

## COMMISSIONER'S REPORT, A. D. 1890.

J. W. DANIELS, WATER COMMISSIONER, DIVISION No. 1, DISTRICT No. 5, LONGMONT, COLORADO, NOVEMBER 7, A. D. 1890.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Left Hand . . . . .	30	160	26	. . . . .	950	160	8,000	12,480	. . . . .	. . . . .
The Highland . . . . .	38	160	40	. . . . .	2,000	625	3,100	16,200	. . . . .	. . . . .
The Supply . . . . .	24	160	18	. . . . .	500	200	1,500	5,600	. . . . .	. . . . .
The Rough and Ready . . . . .	20	160	18	. . . . .	1,500	325	1,600	4,500	. . . . .	. . . . .
The Palmerton . . . . .	6	160	6	. . . . .	400	150	500	1,800	. . . . .	. . . . .
The Longmont Supply . . . . .	10	160	8	. . . . .	800	150	500	2,000	. . . . .	. . . . .
The Chapman & McCaslin . . . . .	4	160	3	. . . . .	100	. . . . .	650	300	. . . . .	. . . . .
The Oligarchy . . . . .	24	160	18	. . . . .	1,000	300	500	6,800	. . . . .	. . . . .
The Zwick & Turner . . . . .	2½	160	2	. . . . .	100	300	. . . . .	300	. . . . .	. . . . .
The Ni Wot . . . . .	5	160	6	. . . . .	200	. . . . .	300	500	. . . . .	. . . . .
The Bonus . . . . .	3	160	. . . . .	. . . . .	100	. . . . .	300	375	. . . . .	. . . . .
The James . . . . .	10	160	6	. . . . .	300	100	350	1,000	. . . . .	. . . . .
The Pella . . . . .	6	160	7	. . . . .	250	. . . . .	300	1,200	. . . . .	. . . . .





## WATER COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Smead . . . . .	2	160	3	.	.	.	140	60	.	.
The Runyan . . . . .	1	85	.	.	.	.	200	.	.	.
The Holland . . . . .	3	78	.	.	.	.	.	60	.	.
The Bader . . . . .	1	.	.	.	.	.	.	.	.	.
The Altona . . . . .	1	75	.	.	.	.	40	.	.	.
The Baker & Weese . . . . .	1	.	.	.	.	.	.	.	.	.
The Goss Private No. 1 . . . . .	$\frac{1}{2}$	38	.	.	.	.	.	40	.	.
The Goss Private No. 2 . . . . .	$\frac{1}{2}$	38	.	.	.	.	.	.	.	.
The Table Mountain . . . . .	2	42	.	.	.	.	.	.	.	.
The Baum & Goyu . . . . .	3	.	.	.	.	.	.	.	.	.
The Nelson . . . . .	1	.	.	.	.	.	.	80	.	.
The Toll-Gate . . . . .	$\frac{1}{2}$	.	.	.	.	.	.	100	.	.
The Star . . . . .	.	.	.	.	.	.	.	.	.	.
The Crocker . . . . .	.	.	.	.	.	.	.	.	.	.
				50						

[illegible]

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 5, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEERS OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
J. Hetzel . . . . .	250	None	. . . .	25	. . . .	. . . .	. . . .	Sec. 30, T. 3 N., R. 67 W.	Small	. . . . Strongly alkaline
J. W. Goss . . . . .	965	4	17	675	. . . .	. . . .	. . . .	Sec. 24, T. 3 N., R. 70 W.	. . . . .	. Flow lost, not recovered

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 5, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office.	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
Lower Dry Creek Ditch . . . . .	Dry creek . . . . .	July 3, 1890	Jan. 1, 1887	5.62	B. Ottens and Wm. Butler
Ni Wot Feeder to Ni Wot Ditch . . . . .	Dry creek . . . . .	July 5, 1890	Jan. 1, 1890	66	The Ni Wot Ditch Co
McKay Lateral from Highland Ditch . . . . .	St. Vrain creek . . . . .	July 7, 1890	Apr. 10, 1890	21	J. A. McKay

## STATEMENT, CONCERNING RESERVOIRS

IN WATER DISTRICT No. 5, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888 TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Enlargement of Highland Reservoir No. 2	St. Vrain Creek	Highland . . .	June 28, 1889	Aug. 1, 1888	47,262,600	The Highland Ditch Co.
Oligarchy Reservoir . . . . .	St. Vrain Creek	Palmerton . .	July 3, 1889	April 7, 1884	47,044,800	The Oligarchy Ditch Co.
Last Chance Reservoir . . . . .	St. Vrain Creek	Supply . . . .	April 5, 1890	Mar. 11, 1890	117,000,000	. . . W. S. Mitchell, <i>et al</i>
Enlargement of Oligarchy Reservoir No. 1	St. Vrain Creek	Palmerton . .	June 28, 1890	Mar. 31, 1890	15,568,632	The Oligarchy Ditch Co.
Sanborn Reservoir . . . . .	St. Vrain Creek	Highland . . .	July 15, 1890	May 1, 1890	4,970,000	. . . . . F. J. Sanders
McIntosh Reservoir . . . . .	St. Vrain Creek	Oligarchy . . .	Aug. 11, 1890	July 28, 1890	72,745,200	. . . G. R. McIntosh, <i>et al</i>

## STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT NO. 5, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON		Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
Sec.	T. N. R. W.								
22	3	68	1,000	4	Earth . . .	\$ 500 00	26,100,000	Irrigation .	. . . . St. Vrain creek
27	3	63	. . . . .	. . . . .	Natural . .	1,500 00	40,000,000	Irrigation .	. . . . St. Vrain creek
5	3	69	2,500	9	Earth . .	1,500 00	117,000,000	Irrigation .	. . . . St. Vrain creek
16	3	69	600	7	{ Earth and rock }	1,200 00	50,000,000	Irrigation .	. . . . St. Vrain creek
25	3	70	. . . . .	. . . . .	Natural . .	1,000 00	28,000,000	Irrigation .	. . St. Vrain creek



## STATEMENT CONCERNING RESERVOIR SITES, UNIMPROVED,

IN DISTRICT No. 5, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

Sec	LOCATION ON		Estimated area in acres.	Length of dam in feet	Greatest depth of dam in feet	Material convenient for construction	Estimated cost	Estimated capacity in cubic feet	Source of supply	REMARKS
	T	N R W								
29	3	69	250	800	8	.....	..	59,000,000	St. Vrain ..	.....
31	3	68	1,000	.....	..	Natural ..	..	913,500,000	St. Vrain ..	.....
22	3	70	80	1,000	10	.....	.....	25,000,000	St. Vrain ..	.....
16	3	69	500	2,000	17	.....	.....	174,000,000	St. Vrain ..	Enl. of existing reservoir
23	2	73	320	450	22	.....	.....	174,000,000	Beaver ....	.....

*Water District No. 6*—S. J. Plumb, Commissioner, Erie, Weld county.

Mr. Plumb reports for 1890, an abundance of water, during April and May, for all irrigating purposes, and a large excess passing out of the district, which, if stored, would have given ample supply during the season.

He was called to distribute water June 5, and was actually employed 89 days, with an assistant 78 days, a second assistant on special work 6 days, and a third, in charge of reservoir ditches, 16 days.

There was a great scarcity of water in August, and about September 1 the small supply was distributed among the several ditches needing it for the irrigation of orchards and small fruits.

The small grains and seeded grasses averaged about two-thirds of a crop, and the native grasses about one-half. These losses might have been avoided by proper storage in times of excess of water, earlier in the season.

He further reports much difficulty in securing the construction of proper rating flumes in many ditches selling water, and attributes the disinclination on the part of the owners to put them in, to the fact that they are selling water in excess of the capacities of their ditches, and are consequently adverse to any ratings that would show the great discrepancy between decreed quantity and actual capacity.

He suggests remedial legislation, making the application of water to the land the basis of appropriation, and that the present decrees be adjusted thereto.

He thinks the owners of ditches carrying water for hire should be required to have their ditches in repair and ready for the reception of water by April 1 of each year, as thereby the consumers would receive the benefit of the early flow of water, and save many crops otherwise lost.

He reports about 3,500 acres irrigated from stored waters, and estimates that quantity could be increased to 35,000 acres, with proper storage facilities. He suggests State aid for this purpose.

Mr. Plumb has so managed his district that very little complaint has come to this office, and his report indicates an economical administration of his office.

## COMMISSIONERS REPORT, A. D. 1890.

## DIVISION No. 1—DISTRICT No. 6.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet, per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage
Lower Boulder . . . . .	22	175	. . . . .	3,682	890	40	1,230	1,506	. . . . .
Smith and Goss . . . . .	1	175	. . . . .	125	50	10	60	. . . . .	. . . . .
Howell Ditch . . . . .	1	100	. . . . .	400	. . . . .	. . . . .	400	. . . . .	. . . . .
Howard Ditch . . . . .	2	100	. . . . .	600	50	. . . . .	400	100	. . . . .
McGinn Ditch . . . . .	3	175	. . . . .	700	100	50	150	350	. . . . .
Jones and Donnelly . . . . .	1	100	. . . . .	300	10	50	225	15	. . . . .
Autrey and Eggleston . . . . .	1	50	. . . . .	100	25	. . . . .	60	15	. . . . .
Anderson Ditch . . . . .	3	175	. . . . .	425	75	50	110	175	. . . . .
Goddard, Daily and Plumb . . . . .	6	60	. . . . .	700	250	. . . . .	350	100	500
Hauck No. 2 . . . . .	1½	30	. . . . .	100	. . . . .	. . . . .	75	25	. . . . .
Martha M. Matthews . . . . .	1	100	. . . . .	82	2	. . . . .	70	20	. . . . .
N. H. Smith and Tyler . . . . .	1	30	. . . . .	200	25	. . . . .	175	. . . . .	. . . . .
William C. Hake . . . . .	1	30	. . . . .	100	15	. . . . .	65	20	. . . . .

East Boulder	3	150	700	250	50	100	275	.....
Plumb Ditch	3	150	450	40	.....	410	.....	.....
Eggleston No. 2	1	50	150	15	.....	90	45	.....
Rural Ditch	5	150	1,860	445	.....	1,210	195	.....
South Boulder and Bear Creek	7	175	900	100	100	450	250	.....
Miscellaneous—seven small ditches	4	175	500	80	100	225	95	.....
North Boulder Farmers'	6	175	800	150	100	200	300	.....
Farmers' Ditch	8	200	2,500	600	300	900	600	.....
Hauck No. 1	½	40	100	.....	.....	100	.....	.....
Cottonwood No. 2	3	150	500	125	75	100	200	.....
Dry Creek and Davidson	8	150	800	150	50	300	300	.....
Smith and Eummons	2	40	506	100	.....	355	51	.....
Dry Creek No. 2	5	175	900	100	100	500	175	.....
Andrews and Farwell	3	150	100	.....	.....	.....	100	.....
Carr and Tyler	½	30	380	200	.....	180	.....	.....
Enterprise	5	175	900	150	100	150	500	.....
Butte Mills	3	100	500	100	100	230	65	.....
Leyner	4	100	600	25	.....	465	110	.....
Delechant	1	100	100	15	.....	35	50	.....
Marshallville	8	175	1,200	360	100	200	600	.....
Highland Ditch—south side	6	100	1,600	500	400	.....	700	.....
Cottonwood No. 1	8	173	1,500	200	.....	400	900	.....

COMMISSIONER'S REPORT, A. D. 1890—*Concluded.*

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage
Central . . . . .	½	40	40	100	10	..	80	10	..
South Side . . . . .	½	40	40	100	..	..	95	5	..
McKenzie . . . . .	1	30	30	100	..	..	90	10	..
Leggett . . . . .	4	150	..	300	25	..	225	50	..
Eggleson No. 1 . . . . .	½	30	..	100	10	..	70	20	..
Last Chance . . . . .	5	30	..	45	..	..	..	..	..
South Boulder Cañon. . . . .	14	125	..	1,500	200	..	300	1,000	..
Church . . . . .	7	25	..	150	..	..	..	..	..
Boulder and Weld Co . . . . .	15	100	..	2,157	690	25	450	786	..
Davidson . . . . .	18	65	..	4,480	270	100	1,195	2,915	..
Kinnear . . . . .	8	25	..	2,500	..	..	..	..	..
South Boulder and Coal Creek. . . . .	18	45	..	1,000	200	25	300	475	..
Goodhue . . . . .	18	130	..	4,800	800	25	325	3,650	..
Boulder and White Rock . . . . .	20	130	..	12,000	3,000	..	4,000	5,000	..

Boulder and Left Hand . . . . .	15	125	. . . . .	2,000	400	. . . . .	100	1,500	. . . . .
Four Mile Cañon . . . . .	2	30	. . . . .	300	150	. . . . .	100	50	. . . . .
Six Mile . . . . .	3	30	. . . . .	500	150	. . . . .	200	150	. . . . .
North Branch . . . . .	3	20	. . . . .	200	50	. . . . .	75	75	. . . . .
Forbes . . . . .	3	30	. . . . .	200	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Town of Boulder . . . . .	2	365	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Wellman . . . . .	1	40	. . . . .	200	50	. . . . .	110	40	. . . . .
Matthews . . . . .	2	30	. . . . .	150	25	. . . . .	25	100	. . . . .
Revolution . . . . .	14	40	. . . . .	2,500	600	. . . . .	550	1,350	. . . . .
Community . . . . .	40	40	. . . . .	20,000	2,000	. . . . .	13,275	5,000	. . . . .
Silver Lake . . . . .	6	120	. . . . .	100	20	. . . . .	80	. . . . .	. . . . .
Totals in district . . . . .	258	. . .	. . . . .	18,740	13,777	1,945	31,615	29,845	500

Total number of acres irrigated in district, 76,682.



# STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 6, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
H. W. Allen . . . . .	400	. . .	. . .	196	. . .	. . .	. . .	Sec. 12, T. 1 S., R. 70 W. . .	3	. . . . . Water is excellent

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 6, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Maffet Ditch . . . . .	Coal creek . . . . .	May 4, 1889	Feb. 4, 1889	3.00	. . . . . Maffet & Jones
The Ross Ditch . . . . .	Coal creek . . . . .	May 4, 1889	Feb. 4, 1889	3.00	. . . . . Maffet & Jones
The Get There Ditch . . . . .	Coal creek . . . . .	Dec. 4, 1889	Oct. 10, 1889	16.32	. . . . . Geo. W. Matthews
The Silver Lake Ditch . . . . .	Boulder creek . . . . .	Feb. 4, 1890	Feb. 22, 1888	20.00	. . . . . The Silver Lake Ditch & Reservoir Company
The Sibley Ditch . . . . .	Waste from lower Boulder ditch . . . . .	April 22, 1890	Not stated . .	Not given	. . . . . T. D. Sibley
The Boulder and Beaver Company's { Upper Ditch Lower Ditch	South Boulder creek	Aug. 16, 1890	July 10, 1890	38.70	} . . . . . The Boulder & Beaver Placer Company
	South Boulder creek	Aug. 16, 1890	July 18, 1890	38.70	
The High Line Ditch . . . . .	Middle Boulder cr'k	Nov. 19, 1890	. . . . .	45.00	. . . . . George W. Giggey and Edward S. Snell

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 6, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Round Lake Reservoir . . . . .	South branch of North Boulder Creek	On the stream . . . . .	Feb. 4, 1890	Nov. 1, 1889	8,712,000	{ James P. Maxwell and George S. Oliver
Island Lake Reservoir . . . . .			Feb. 4, 1890	Nov. 1, 1889	13,068,000	
Crystal Lake Reservoir . . . . .			Feb. 4, 1890	Jan. 1, 1890	3,659,040	
Silver Lake Reservoir . . . . .			Feb. 4, 1890	Feb. 22, 1888	46,173,000	
A. Nissen & Co.'s Reservoirs	Clear Creek, and seepage from Golden City Ditch; and from Community Ditch from South Boulder Creek	Golden City and Kalston Ditch and Community Ditch	Mar. 5, 1890	May 1, 1889	222,000	A. Nissen & Company
			Mar. 5, 1890	Dec. 10, 1889	6,250,000	
			Mar. 5, 1890	Dec. 16, 1889	328,000	
			Mar. 5, 1890	Dec. 16, 1889	606,000	
			Mar. 5, 1890	Dec. 16, 1889	1,236,000	
			Mar. 15, 1890	Nov. 15, 1886	13,204,000	
A. J. Zang's Reservoirs	Same as above . . . . .	Same as above . . . . .	Mar. 15, 1890	Sept. 1, 1888	926,400	Adolph J. Zang
			Mar. 15, 1890	Dec. 16, 1889	7,696,000	
			Mar. 15, 1890	Feb. 18, 1890	1,519,800	
Coal Park Reservoir . . . . .	Coal and Rock Creeks	On the streams . . . . .	Mar. 27, 1890	Jan. 2, 1890	6,000,000	Edward B. Light

Coal Pits Reservoir	Coal and Rock Creeks	On the streams	Mar. 27, 1890	Jan. 2, 1890	1890, 1891	Edward B. Light
Beasley Reservoir	Boulder Creek	Boulder & White Rock	Sept. 4, 1890	Aug. 8, 1890	98,532,720	J. J. Beasley, et al
Unnamed Reservoir	Coal Creek	Last Chance Ditch	Oct. 29, 1890	Dec. 10, 1883	17,500,000	Francis Smart, et al
Jasper Reservoir	Jasper Gulch	Built in the gulches	Nov. 19, 1890	Nov. 10, 1890	{ 88,000,000	{ George W. Giggey and Edward S. Snell
Diamond Reservoir	Diamond Gulch				{ 20,000,000	
Ruby Reservoir	Ruby Gulch				{ 25,800,000	

Edward B. Light

*Water District No. 7*—J. G. Hartzell, Commissioner, Golden, Jefferson county.

Mr. Hartzell reports for 1889 and 1890, statistical information in tabulated form, and calls attention to defects in the law. Among other things, he recommends a more effective law to compel ditch owners to erect in their ditches suitable head-gates and rating flumes, in order to secure more equitable distribution of the water.

That the superintendents of ditches should be required to collect and furnish to the Water Commissioner, irrigation and agricultural statistics; that a proper gauging station be provided on Clear creek, for the measurement of the stream, and facilities for transmitting the daily discharge to the Water Commissioner, for his information in the distribution of the water.

He thinks, if the diversion of domestic water is permitted from the streams, it should be required to be done in pipes to prevent waste and loss.

He further reports that the issuance of *ex parte* injunctions against the Water Commissioner has worked great injustice to consumers of water, in portions of his district, and advises legislation to prohibit the same.

# COMMISSIONER'S REPORT, A. D. 1890.

DIVISION No. 1—DISTRICT No. 7. IN DISTRICT No. 7 THERE ARE FIFTY-NINE DITCHES HAVING DECREES AND AN INDEFINITE NUMBER WITHOUT DECREES.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Golden Canal . . . . .	47	220	115	39,925	9,217	6,856	950	12,855	1,140	. . .
The Agricultural Ditch . . . . .	28	164	50	15,000	4,575	5,025	515	3,370	550	. . .
The Golden City and Ralston Creek . . .	35	121	65.21	29,500	5,120	4,910	500	9,000	545	. . .
The Rocky Mountain Ditch . . . . .	28	175	54.67	12,280	8,620	2,200	500	5,875	465	. . .
The Clear Creek and Platte River Ditch.	12	185	33.29	4,600	1,420	2,345	235	500	190	. . .
The Colorado Agricultural Ditch . . . .	13	132	29	1,600	150	1,175	50	225	. . .	
The Golden Ditch . . . . .	13.5	110	15	7,000	1,290	480	200	2,500	100	. . .
The Fisher Ditch . . . . .	1.5	200	7	1,100	400	150	465	50	. . .	
The Quelette Ditch . . . . .	1.5	205	5	500	75	50	40	335	. . .	
The Kershaw Ditch . . . . .	2	150	4	500	200	25	50	200	. . .	
The Waunemaker Ditch. . . . .	6	190	4	3,000	1,600	105	95	1,100	20	. . .
The Lee Stewart and Eskius Ditch . . .	6	150	6	1,137	450	150	225	300	. . .	
The Swadley Ditch . . . . .	4	175	3	1,000	280	50	20	600	10	. . .



## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Reno and Juchens Ditch . . .	14	100	5	3,500	850	150	75	2,025	500	.
The Cort, Graves and Hughes Ditch. . .	1.75	195	4	500	100	50	50	275	.	.
The Wadsworth Ditch. . . . .	5	195	3	500	150	50	50	225	10	.
The Lane Ditch . . . . .	1.25	125	3	200	50	.	.	150	.	.
The Page Ditch . . . . .	1.5	125	3	320	120	40	60	80	.	.
The Juchen and Quelette Ditch . . . . .	1.25	125	2.5	120	60	.	.	60	.	.
The Lee and Baugh Ditch. . . . .	1	100	1.5	120	40	.	.	80	.	.
The Slater Ditch. . . . .	.25	100	1	120	80	10	10	20	.	.
The Brown and Baugh Ditch . . . . .	1	120	1.5	130	55	.	15	60	.	.
The Brown's Island Ditch . . . . .	.25	80	.9	5	.	.	.	5	.	.
The South Side Ditch . . . . .	.63	125	1	9	.	.	.	9	.	.
The Lee's Island Ditch . . . . .	.25	60	.5	3.5	.	.	.	3.5	.	.
The Sherrick Ditch . . . . .	.25	60	.75	4	.	.	.	4	.	.

The Miles & Eskins' Ditch . . . . .	1	80	1.5	100	40	30	. . . . .	30	. . . . .
The Wolff North Side Ditch . . . . .	.75	100	1.25	60	20	20	. . . . .	20	. . . . .
The Wolff Ditch . . . . .	1.5	100	1.5	125	6	. . . . .	15	100	. . . . .
The Sanderson & Slater Ditch . . . . .	.5	100	1	80	. . . . .	. . . . .	. . . . .	80	. . . . .
The Claus & Couch Ditch . . . . .	.75	100	2	150	75	. . . . .	. . . . .	75	. . . . .
The Lee Ditch . . . . .	.25	100	.75	20	10	. . . . .	. . . . .	10	. . . . .
The Grover North Side Ditch . . . . .	.75	75	1.25	125	25	. . . . .	. . . . .	100	. . . . .
The Sayer & Lee Ditch . . . . .	1	100	1.5	175	50	. . . . .	25	100	. . . . .
The Wadsworth & Graves Ditch . . . . .	.75	75	1	175	50	. . . . .	. . . . .	75	. . . . .
The Graves South Ditch . . . . .	.75	100	1	100	25	. . . . .	. . . . .	75	. . . . .
The Bluff Ditch . . . . .	1	100	2	175	50	25	. . . . .	100	. . . . .
The Sanderson Ditch . . . . .	.25	90	1	40	20	. . . . .	. . . . .	20	. . . . .
The Slater & Moody Ditch . . . . .	.25	75	1	60	20	. . . . .	. . . . .	40	. . . . .
The Rhodes Middle Ditch . . . . .	.25	100	.50	30	15	. . . . .	. . . . .	15	. . . . .
The Cort & Graves Ditch . . . . .	1	100	2	200	50	50	10	75	. . . . .
The Rhodes South Ditch . . . . .	.75	100	1.5	100	40	. . . . .	20	40	. . . . .
The North Side Ditch . . . . .	.25	100	1	40	15	. . . . .	. . . . .	25	. . . . .
The McQuiston Ditch . . . . .	.75	75	1	50	10	10	. . . . .	30	. . . . .
The Churches Ditch . . . . .	3	40	1.5	200	141	. . . . .	30	20	. . . . .
The Bunney & Ballinger Ditch . . . . .	1.25	50	1.5	120	54	14	12	40	. . . . .
The Piquette Ditch . . . . .	1.25	50	1.5	60	. . . . .	20	. . . . .	40	. . . . .
The Haines & Ballinger Ditch . . . . .	1.50	40	1	60	30	5	20	5	. . . . .

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Haines Ditch . . . . .	.25	40	1.5	30	5	5	5	15	.	.
The Brainard & Tucker Ditch . . . . .	.55	50	.9	160	20	20	30	36	.	.
The Reed Ditch . . . . .	1.5	40	1	50	10	15	5	20	.	.
The Haines & Piquette Ditch . . . . .	2	60	1	35	12	.	.	18	.	.
Totals in district . . . . .	255.63	. . .	342.47	126,143.5	30,695	24,035	4,307	40,110	5,530	104,677

# STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 7, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, AND FROM DATA FURNISHED BY PROF. L. G. CARPENTER, LOCAL OBSERVER FOR UNITED STATES GEOLOGICAL SURVEY, AND NOT HERETOFORE PUBLISHED

STATE ENGINEER.

127

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
J. M. Paulding . . . . .	420	. . . . .	. . . . .	390	420	. . . . .	. . . . .	Sec. 25, T. 2 S., R. 68 W. . .	9	. . . . .
V. S. Wright . . . . .	560	3	400	330	390	560	. . . . .	Sec. 25, T. 2 S., R. 68 W. . .	1½	. . . . .
E. E. Farrell . . . . .	429	3½	75	138	415	. . . . .	. . . . .	Sec. 34, T. 2 S., R. 68 W. . .	40	. . . . .
Z. T. Block . . . . .	415	. . . . .	44	215	415	. . . . .	. . . . .	Sec. 35, T. 2 S., R. 68 W. . .	44	. . . . .
Jacob Sanhofer . . . . .	544	4½	45	300	450	. . . . .	. . . . .	Sec. 35, T. 2 S., R. 68 W. . .	4	. . . . .
A. R. Taggart . . . . .	427	3	40	189	426	. . . . .	. . . . .	Sec. 35, T. 2 S., R. 68 W. . .	15	. . . . .
Wimbush & Powell . . . . .	644	{ 4½ } 3	644	441	513	565	585	Sec. 18, T. 3 S., R. 69 W. . .	. . . . .	. . . . .
O. L. Bright . . . . .	908	. . . . .	. . . . .	412	905	. . . . .	. . . . .	Sec. 1, T. 3 S., R. 69 W. . .	. . . . .	Pump 50 feet
Reno Park . . . . .	724	8	40	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 11, T. 3 S., R. 69 W. . .	. . . . .	Pump 60 feet
Joseph Stanley . . . . .	560	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 17, T. 3 S., R. 69 W. . .	. . . . .	Pump 50 feet
Not given . . . . .	200	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sec. 6, T. 4 S., R. 69 W. . .	. . . . .	. . . . . 40 feet from surface

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 7, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
Feeder to Lake Reservoirs 1, 2, 3	Clear Creek . . . . .	Feb. 11, 1889	Feb. 8, 1888	16	{ Union Real Estate, Live Stock and Investment Co.
The Colorado Agricultural Ditch } and Clear Creek and Platte } River Mill & Ditch Co.'s Ditch }	Clear Creek . . . . .	May 3, 1889	Mar. 5, 1888	132.06	{ The Colorado Agricultural Ditch and Clear Creek and Platte River Mill and Ditch Co.
The Risdon Ditch . . . . .	Clear Creek . . . . .	Oct. 24, 1889	Oct. 4, 1875	20.68	. . . . . John S. Risdon
The Farmers' High Line Canal, feeder or pipe-line . . . . .	Clear Creek . . . . .	Mar. 8, 1890	Feb. 4, 1890	50	{ The Farmers' High Line Canal and Reservoir Co.
The Broomfield High Line Ditch	Clear Creek . . . . .	Mar. 15, 1890	Nov. 15, 1886	14	. . . The Broomfield High Line Ditch Co.
The Boyles Ditch . . . . .	Clear Creek . . . . .	April 2, 1890	May 15, 1863	1	. . . . . Robert S. Boyles
The Lookout Water Supply Co.'s Ditch and Pipe-Line . . . . .	Soda and Beaver Creeks, } springs, flood, snow water }	July 14, 1890	April 25, 1890	5.50	. . . The Lookout Water Supply Co.
The Downing and Kountze Lateral Ditch . . . . .	Clear Creek, thro' Golden } D. & Ft. Co.'s Ditch . . }	Aug. 22, 1890	July 31, 1890	27.21	{ The Downing and Kountze Lateral Ditch Co.
Under-ground conduit, unnamed	Under-ground waters . . .	Nov. 29, 1890	Sept. 1, 1890	50	. . . . . A. McL. Hawks

## STATEMENT CONCERNING RESERVOIRS

17

IN WATER DISTRICT No. 7, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Knox & Reser Reservoirs . . . . . <div> <div>{ No. 1 . . . }</div> <div>{ No. 2 . . . }</div> <div>{ No. 3 . . . }</div> </div>	Clear Creek . . . . .	Farmers High Line . . . . .	Dec. 7, 1888	July 16, 1888	<div> <div>{ 2,900,000 }</div> <div>{ 699,150 }</div> <div>{ 1,761,230 }</div> </div>	Jno. W. Knox and H. A. Reser
Lake Reservoir . . . . .	Clear Creek . . . . .	Farmers High Line . . . . .	Dec. 12, 1888	<div> <div>{ Aug. 15, 1888 }</div> <div>{ Oct. 1, 1887 }</div> </div>	<div> <div>{ 13,077,000 }</div> <div>{ 3,900,500 }</div> </div>	Mary E. King and Emma Woolley
Ohio Lake or Reservoir . . . . .	Waste and seepage from . . . . .	<div> <div>{ Farmers High Line }</div> <div>{ and Golden City, }</div> <div>{ &amp; Ralston Creek }</div> <div>{ Ditches . . . }</div> </div>	<div> <div>{ Jan. 19, 1889 }</div> <div>{ Jan. 9, 1889 }</div> </div>	<div> <div>{ Nov., 1886 }</div> <div>{ Aug., 1887 }</div> </div>	<div> <div>{ 1,440,000 }</div> <div>{ 1,675,000 }</div> <div>{ 1,344,000 }</div> </div>	<div> <div>{ Lyman H. Cole }</div> </div>
Enlargement of last named . . . . .	Clear Creek . . . . .	Agricultural . . . . .	Feb. 11, 1889	Feb. 8, 1888	<div> <div>{ 2,400,000 }</div> <div>{ 16,800,000 }</div> <div>{ 1,000,000 }</div> </div>	The Union Real Estate, Live Stock and Investment Company
Lake No. 1, Reservoir . . . . .	Clear Creek . . . . .	Golden City and Ralston Creek . . . . .	Mar. 9, 1889	Dec. 10, 1888	6,000,000	Carie E. Swan and J. S. Swan
Lake No. 2, Reservoir . . . . .	Clear Creek . . . . .	Agricultural . . . . .	April 19, 1889	April 17, 1889	100,000	Nancy J. Cart



## STATEMENT CONCERNING RESERVOIRS—Continued.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Ward Reservoir No. 5 . . . . .	Clear creek . . . . .	Agricultural and Ward (Dist. 9) . . . . .	May 14, 1889	{ April, 1883	9,429,800	{ Wm. S. and Jasper D. Ward
Enlargement of same . . . . .	Bear creek (dist. 9) . . . . .			{ Feb. 28, 1889	6,420,000	
Neal Reservoir . . . . .	Clear creek . . . . .	Agricultural . . . . .	May 20, 1889	May 1, 1886	1,238,859	. . . . . Neal Liverett
Broomfield Reservoir . . . . .	Clear creek . . . . .	Golden City and Ralston creek . . . . .	May 29, 1889	May, 1879	9,324,191	G. W. Dollison & Oliver Graves
A. W. Chamberlain Reservoir . . . . .	Clear creek . . . . .	Agricultural . . . . .	Aug. 23, 1889	June 28, 1889	36,950,000	. . . . . A. W. Chamberlain
Church Reservoir . . . . .	Clear creek . . . . .	Golden City and Ralston creek . . . . .	Aug. 17, 1889	May 15, 1873	7,229,017	. . . . . George H. Church
Cole Reservoir . . . . .	Clear creek . . . . .	Golden City and Ralston creek . . . . .	Dec. 26, 1889	Dec. 17, 1889	1,475,562	. . . . . Lyman H. Cole
{ No. 1 . . . . .	Clear creek, and seepage from Golden City and Ralston Creek Ditch, and from Community Ditch, from South Boulder (Dist. 6) . . . . .	Golden city and Ralston Creek Ditch and Community Ditch (later in district 6) . . . . .	{ Mar. 5, 1890	{ May 1, 1889	222,000	
No. 2 . . . . .				{ Dec. 10, 1889	6,250,000	
A. Nissen & Company's Reservoirs. { No. 3 . . . . .				{ Dec. 16, 1889	328,000	
{ No. 4 . . . . .				{ Dec. 16, 1889	606,000	. . . . . A. Nissen & Company
No. 5 . . . . .				{ Dec. 16, 1889	1,236,000	
{ No. 6 . . . . .	Same as the above . . . . .	Same as the above . . . . .	{ Mar. 15, 1890	{ Nov. 15, 1886	13,204,000	
{ No. 1 . . . . .				{ Sept. 1, 1888	926,000	
A. J. Zang's Reservoirs. { No. 2 . . . . .	Same as the above . . . . .	Same as the above . . . . .	{ Mar. 15, 1890	{ Dec. 16, 1889	7,696,000	. . . . . Adolph J. Zang
{ No. 3 . . . . .				{ Feb. 18, 1890	1,519,800	

[illegible]

STATEMENT CONCERNING RESERVOIRS—*Concluded.*

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
Christinck Reservoir . . . . .	{ Clear creek, also Dry } { creek (Dist. 2) . . }	Farmers' High Line and Feeder, Dry Ck	Sept. 5, 1890	1888—1890	4,000,000	. . . . . Louis A. Christinck
{ No. 1 . . . . . }				Oct. 1, 1885	1,500,000	
{ No. 2 . . . . . }				Nov. 30, 1885	2,240,000	
{ No. 3 . . . . . }				Nov. 30, 1886	291,250	
{ No. 4 . . . . . }				Nov. 30, 1887	1,650,000	
{ No. 5 . . . . . }				Nov. 30, 1888	1,440,000	
{ No. 6 . . . . . }				Nov. 30, 1888	1,400,000	
Croke's Reservoirs	Clear Creek . . . . .	{ Farmers' High Line Canal and Reservoir Company Canal }	Sep. 22, 1890	Nov. 30, 1888	2,000,000	. . . . . Thomas B. Croke
{ No. 7 . . . . . }				Aug. 28, 1890	1,050,000	
{ No. 8 . . . . . }				Aug. 28, 1890	2,625,000	
{ No. 9 . . . . . }				Aug. 28, 1890	645,000	
{ No. 10 . . . . . }				Aug. 28, 1890	980,000	
{ No. 11 . . . . . }				Dec. 15, 1888	7,996,000	
{ No. 12 . . . . . }				Dec. 15, 1890	3,837,500	
{ No. 13 . . . . . }				Dec. 15, 1890	4,750,000	
Ashwood Reservoir . . . . .	Clear Creek . . . . .	Farmers' High Line	Sept. 24, 1890	1890		. . . . . W. H. Br

Animal Reservoir.	Clear Creek	Farmers' High Line.	Sept. 24, 1892	1890	1891	1890	1891	1890	1891
Lake No. 1 . . . . .	Clear Creek	Farmers' High Line .			April 20, 1888	8,820,712			
Lake No. 2 . . . . .	Clear Creek	Farmers' High Line .			Dec. 19, 1889	2,758,785			
Lake No. 3 . . . . .	"The Gulch"	Built in the gulch .	Oct. 1, 1890		Mar. 1890	153,331			M. H. Bechtolt
Lake No. 4 . . . . .	Clear Creek	Golden City and Ralst			Dec. 19, 1889	359,805			
Lake No. 5 . . . . .	"The Gulch"	Built in the gulch .			Oct. 25, 1890	1,097,712			
Wyman Reservoir . . . . .	Local Springs, etc				Sept. 30, 1890	60,668			Moses Wyman
Winwood Reservoir . . . . .	Clear Creek	Farmers' High Line .	Nov. 25, 1890			1,176,000			W. H. Brown

## STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT No 7, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

Sec.	LOCATION ON T. S. R. W.	Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
32	I 67	75x60 feet	75	3	Earth . . .	\$ 50	Not given	Irrigation . . . . .	Clear creek
10	I 68	20	. . . .	. . . .	Earth . . .	. . . .	6,000,000	Irrigation and domestic . . . . .	Clear creek
20	4 68	50	. . . .	. . . .	Natur'l lake	. . . .	. . . . .	Pleasure and fish . . . . .	Clear creek
35	I 68	. . . .	. . . .	. . . .	Earth . . .	. . . .	. . . . .	Irrigation and domestic . . . . .	Clear creek
25	I 68	50.57	1,278	12	Earth . . .	. . . .	7,592,988	Irrigation and domestic . . . . .	Clear creek
25	I 69	1.78	. . . .	. . . .	. . . . .	. . . .	222,500	. . . . .	. . . . .
25	I 69	34.50	. . . .	. . . .	. . . . .	. . . .	6,250,000	Irrigation . . . . .	. . . . .
25	I 69	4.10	. . . .	. . . .	. . . . .	. . . .	328,000	Domestic and pleasure . . . . .	Clear creek
25	I 69	3.63	. . . .	. . . .	. . . . .	. . . .	606,000		
36	I 69	15.76	. . . .	. . . .	. . . . .	. . . .	1,236,000		
36	I 69	33.65	. . . .	. . . .	. . . . .	. . . .	13,204,000	. . . . .	. . . . .
26	I 69	3.15	. . . .	. . . .	Earth . .	. . . .	926,400	Irrigation and domestic . . . . .	{ Clear creek and Ralston creek
and		39.54	. . . .	. . . .	Earth . . .	. . . .	7,698,600		
34		7.85	. . . .	. . . .	Earth . . .	. . . .	1,519,800		
36	I 69	38.67	913	12	Earth & slag	. . . .	9,342,191	Irrigation and domestic . . . . .	{ Clear creek and Ralston creek

5	2	37	.75	...	6	Earth . . .	150	...	Irrigation . . . . .	Clear creek
33	2	67	...	...	...	Earth . . . . .	...	...	Irrigation and domestic . . . . .	Clear creek
2	2	68	1.50	...	...	Earth . . . . .	...	...	Irrigation and domestic . . . . .	Clear creek
2	2	68	5	250	6	Earth . . . . .	500	300,000	Irrigation, stock and domestic . . . . .	Clear creek
3	2	68	25	1,360	14	Earth . . . . .	...	290,000	} Irrigation and domestic . . . . .	Clear creek
33	1	68	5	1,000	7	Earth . . . . .	...	699,150		
34	1	68	8	420	7	Earth . . . . .	...	1,763,230		
3	2	68	24	280	10	Earth & slag	850	1,000,000	Irrigation, stock and domestic . . . . .	Clear creek
3	2	68	40	2,640	14	Earth . . . . .	6,000	7,588,990	Agricultural and domestic . . . . .	Clear creek
3	2	68	5	400	10	Earth, { rock face }	500	800,000	Irrigation, stock and domestic . . . . .	Clear creek
5	2	68	...	...	...	Earth . . . . .	...	...	} Irrigation and domestic . . . . .	Clear creek
5	2	68	...	...	...	Earth . . . . .	...	...		
5	2	68	...	...	...	Earth . . . . .	...	...		
8	2	68	5	320	8	Earth . . . . .	200	...	Irrigation and domestic . . . . .	Clear creek
10	2	68	21	275	20	Earth . . . . .	425	800,000	Irrigation, stock and domestic . . . . .	Clear creek
14	2	68	...	...	...	...	...	...	Irrigation, stock and domestic . . . . .	Clear creek
18	2	68	...	...	...	Earth . . . . .	350	...	Irrigation and domestic . . . . .	Clear creek
18	2	68	...	...	...	Earth . . . . .	150	...	Irrigation and domestic . . . . .	Clear creek
18	2	68	...	...	...	Earth . . . . .	150	...	Irrigation and domestic . . . . .	Clear creek
18	2	68	...	...	...	Earth . . . . .	150	...	Irrigation and domestic . . . . .	Clear creek
23	2	68	...	...	...	Earth . . . . .	...	...	Irrigation and domestic . . . . .	Clear creek
24	2	68	5	...	...	Earth . . . . .	...	800,000	Irrigation and domestic . . . . .	Clear creek
									{ Irrigation, stock, domestic and R. R. . . . . }	Clear creek



## STATEMENT CONCERNING EXISTING RESERVOIRS—Continued.

LOCATION ON Sec. T. S. R. W.			Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
25	2	68	1	250	7½	Earth . . .	\$ 400 00	. . . . .	Irrigation . . . . .	. . Clear creek
25	2	68	1	. . . . .	9½	Earth&stone	150 00	. . . . .	Raising fish . . . . .	. . Clear creek
25	2	68	.40	. . . . .	7	Earth . . .	150 00	. . . . .	Irrigation . . . . .	. . Clear creek
25	2	68	35x50 feet	. . . . .	5	Earth . . .	100 00	. . . . .	Irrigation . . . . .	. . Clear creek
35	2	68	1	575	5	Earth . . .	300 00	. . . . .	Irrigation . . . . .	. . Clear creek
35	2	68	2	. . . . .	14	Earth . . .	. . . . .	. . . . .	Irrigation . . . . .	. . Clear creek
35	2	68	2	. . . . .	12	Earth . . .	. . . . .	. . . . .	Irrigation . . . . .	. . Clear creek
35	2	68	2	. . . . .	10	Earth . . .	. . . . .	. . . . .	Irrigation . . . . .	. . Clear creek
35	2	68	5	600	12	Earth . . .	300 00	. . . . .	Irrigation . . . . .	. . Clear creek
36	2	68	.25	150	4	Earth . . .	75 00	. . . . .	Irrigation . . . . .	. . Clear creek
11	2	69	40.01	. . . . .	8	Earth . . .	. . . . .	. . . . .	Irrigation . . . . .	. . Clear creek
12	2	69	15	1,500	14	Earth . . .	. . . . .	7,229,017	Irrigation and domestic	. . Clear creek
12	2	69	1.50	450	4	Earth . . .	100 00	3,265,000	Irrigation, stock and domestic	. . Clear creek
23	2	69	10	. . . . .	. . . . .	Earth . . .	. . . . .	200,000	Irrigation, stock and domestic	. . Clear creek
24	2	69	40	500	12	Earth . . .	. . . . .	. . . . .	Irrigation and domestic	. . Clear creek
25	2	69	60	400	10	Earth . . .	1,100 00	2,800,000	Irrigation, stock and domestic	. . Clear creek
26	2	69	9.62	475	10	Earth . . .	350 00	2,753,785	Irrigation and domestic	. . Clear creek

27	2	69	55.20	928	10	Earth . . .	2,500 00	14,270,130	Irrigation and domestic	Clear creek
27	2	69	30.80	245	8	Earth . . .	350 00	8,820,712	Irrigation and domestic	Clear creek
27	2	69	1.76	1,484	8	Earth . . .	550 00	153,331	Irrigation and domestic	Clear creek
27	2	69	4.40		8	Earth . . .		1,997,712	Irrigation and domestic	Clear creek
3	3	68	.50		4	Earth . . .			Irrigation	Clear creek
16	3	68	1	900	9	Earth . . .	1,000 00		Irrigation, stock and domestic	Clear creek
17	3	68	10			Earth . . .			Irrigation and domestic	Clear creek
3	3	69				Earth . . .		1,440,000	Irrigation and domestic	Clear creek
3	3	69				Earth . . .		1,675,000	Irrigation and domestic	Clear creek
3	3	69				Earth . . .		1,344,000	Irrigation and domestic	Clear creek
7	3	69	5			Earth & rock	50 00	120,000	{ Irrigation, stock, domestic and fish }	Clear creek
7	3	69	75	900	12	Earth & rock		16,325,000	Irrigation, stock and domestic	Clear creek
24	3	69	60			Natural . .			Pleasure and fish	Clear creek
27	3	69	5			Natural . .		100,000	{ Fish culture, stock and pleasure }	Clear creek
27	3	69	5			Natural . .		100,000		Clear creek
32	3	69				Earth . . .		100,000	Irrigation and domestic	Clear creek
32	3	69	6.24		9	Earth . . .		1,258,859	Irrigation and domestic	Clear creek
12	3	70	10.32		8	Earth . . .		3,343,120	Irrigation and domestic	Clear creek
27	3	70	.78	269	10	Earth . . .				
27	3	70	12.02	895	10	Earth . . .		4 reservoirs	Irrigation, domestic and ice cutting	Clear creek
27	3	70	.70	708	10	Earth . . .		. . . 838,000		
27	3	70	1.97	1,317	10	Earth . . .				

STATEMENT CONCERNING EXISTING RESERVOIRS—*Concluded.*

LOCATION ON		Sec.	T.S.	R.W.	Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
11	3	68			5			Natural			Irrigation, stock and domestic.	Clear creek
12	4	68			1	300	5	Earth			Irrigation, stock and domestic.	Clear creek
12	4	68			4	100	4	Earth			Irrigation, stock and domestic.	Clear creek
13	4	68			6			Natural			{ Domestic, stock, fish culture and ice pond	Clear creek
14	4	68			5	1,000	10	Earth	\$ 1,200 00		Irrigation, stock and domestic.	Clear creek
14	4	68			3	650	5	Earth	450 00		Irrigation, stock and domestic.	Clear creek
18	4	68			12						Irrigation and domestic.	Clear creek
19	4	68			30	1,200	8	Adobe soil.			Irrigation and domestic.	Clear creek
20	4	68				600	8	Earth	350 00		Fish, ice and domestic.	{ Springs and Clear creek
20	4	68			1.50			Earth	1,500 00		Irrigation and domestic.	Clear creek
5	4	69			3.50	1,800	26	Earth			Irrigation and domestic.	Clear creek
5	4	69			1.50	450	15	Earth	400 00		Irrigation and domestic.	Clear creek
N.E. 6	4	69			2.50	1,000	12	Earth			Irrigation, stock and domestic.	Clear creek
11	4	69						Earth		1,000,000	Irrigation and domestic.	Clear creek
14	4	69						Earth		16,800,000	Irrigation and domestic	Clear creek
15	4	69						Earth		2,400,000	Irrigation and domestic.	Clear creek
14, 15 22, 23	4	69			20	1,050		Adobe soil.	2,250 00		Irrigation and domestic.	Clear creek
23	4	69			10.5			Earth			Irrigation and domestic.	Clear creek

24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--

## STATEMENTS CONCERNING RESERVOIR SITES

UNIMPROVED IN DISTRICT No. 7, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON		Estimated area	Length of dam in feet about	Greatest depth of dam in feet about	Material convenient for construction	Estimated cost	Estimated capacity in cubic feet	Source of supply	REMARKS
Sec.	T. S. R. W.								
31	1	68	7 acres	900	10			Clear creek	
11	5	74						Chicago creek	Two thousand feet along creek
14	5	74						Chicago creek	Three thousand feet along creek
14	4	67	96 acres				36,950,000		
Dollison			8 acres	1,000	7		300,000	Clear creek	
25	2	68			6			Clear creek	
30	1	68	8 acres	1,000	8			Clear creek	
27	2	69	2 6-10 acres				359,305	Clear creek	
15	4	70					53,675	Mt. Vernon gulch	
24	2	68	20 acres	800	20		200,000	Clear creek	
5	4	69	6 acres	3,000	25		2,600,000	Clear creek	
5	4	69	4 acres	500	25		2,600,000	Clear creek	
22	4	69	140 acres	1,200	24			Clear creek	
16	4	69	7 acres		8			Clear creek	

*Water District No. 8*—S. F. Couch, Commissioner, Littleton, Arapahoe County.

Mr. Couch reports for 1889, an unusual scarcity of water in the Platte river, but owing to opportune rains, the crops were generally good; 20,534 acres were irrigated directly from ditches, and 763 acres from seepage, the seepage water being mainly from the Northern Colorado Irrigation Co.'s canal; 48,232 acres are reported under ditch.

No serious difficulties were encountered in the distribution of water.

For 1890, the report shows 49,684 acres under ditch and 15,077 acres irrigated. The decrease in the amount of land irrigated this year, is attributed to the great scarcity of water, much of the land seeded receiving no water during the season. As a result the loss of grain crops under all ditches taking water from the smaller tributaries of the Platte, and under the Northern Colorado Irrigation Co.'s canal, was very serious, in many cases being entire failures, the average being about one-half a crop. Much difficulty was experienced in keeping head-gates closed, the English High Line especially having been frequently raised during the night, by unknown parties, and threatening notices placed thereon. An assistant was stationed at this gate, to stand guard, and little further interference followed.

Mr. Couch complains of a lack of rating flumes in several ditches, and head-gates so out of repair as to render the regulation of the water difficult and uncertain.

He advises that ditches carrying ten cubic feet of water per second and in excess, should be required to have a Superintendent or ditch-walker, to whom instructions could be given as to the opening and closing of head-gates at flood times.

The Commissioner's tabulated statement for 1890 will be found herein.



## COMMISSIONER'S REPORT, A. D. 1890.

DIVISION No. 1—DISTRICT No. 8.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
French Ditch . . . . .	2.50	70	3	75	40	.	35	.	.	.
Smith Ditch . . . . .	.50	30	4.50	80	.	.	80	.	.	.
McCracken Ditch . . . . .	1.50	65	5	160	.	.	31	8	.	.
Heiser Ditch . . . . .	.25	75	2	80	.	.	50	10	.	.
* Alderman Ditch . . . . .	.50	.	.	.	.	.	.	.	.	.
Success Ditch . . . . .	.50	120	2	160	80	.	.	.	.	.
Snell Ditch . . . . .	6	120	1	200	60	.	.	.	.	.
† Cottonwood Gulch Ditch . . . . .	1.50	150	3	200	35	.	70	95	.	.
J. B. Hiscon Ditch . . . . .	.50	175	2	160	50	.	50	20	.	.
† Melvin Co. Ditch and Reservoir . . . . .	1	.	.	.	.	.	.	.	.	.
Darrow & Loy Ditch . . . . .	2	170	2	60	60	.	.	.	.	.
Dane Hawkeye and Good Ditch . . . . .	1.75	175	3	160	50	.	30	.	.	.
Towle Ditch . . . . .	1	160	3	75	10	.	20	.	.	.

Ditch Name	175	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	15	10	5	0
George Dane Ditch	.25	30	4.50	20	15															
§ Murnaur Ditch																				
Pioneer Ditch	2			170																
West Cherry Creek Ditch	3.50	160	3.33	60	40											20				
¶ Cleona Ditch	2			195																
Parker Ditch	3	140	1.50	50	20												15			
The Boss Ditch	2	30	1.25	80												80				
** Gillman Ditch	3.50																			
†† Fifty-Nine Ditch No. 1	2	60	.50	100																
Parker Ditch No. 2	2	170	1.50	80	12											50	8			
Rowley Ditch	1.50	30	2	80												80				
Hertzoy Ditch	2	135	2.50	160	13											120	17			
Montgomery Ditch	3	130	3	60	15											45				
** Seneca Ditch	1.50			200																
Barnes Ditch	3.25	120	2.50	80												80				
Haley Ditch	1.50	170	3	160	70											82	8			
Monroe Ditch	1	65	3.50	200	25											175				
¶ J. Byron Tucker Ditch	1.25			75																
Schultz Ditch	.75	200	1.50	100	3											60				
John Jones Ditch	3	210	2	200	140											40				60

\* Not used on account of no water.

† Storage.

‡ To be used for tow purposes; not used this year.

§ Not used

¶ Freshets having washed out head-gate ditch has not been used.

\* Not used this year on account of scarcity of water.

\*\* Not used this year.

†† So little water, running short time, no irrigation accomplished.

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
Bear Creek Ditch . . . . .	3	70	1	300			40			
* Glenn Grove Feeder . . . . .										
Plum Creek Ditch . . . . .	2.50	60	1	160	35			10		
Benjamin Quick Ditch . . . . .	.75	210	1.33	40	4			32		
Huntsville Ditch . . . . .	2.50	150	2	100			100			
Grove Ditch . . . . .	1.25	175	2.50	50			50			
† Reservoir Ditch . . . . .	1.50	60	8							
J. F. Gardener Ditch . . . . .	1.50	150	2	100	22		53			
Kenner Ditch . . . . .	.50	100	.50	20				20		
Stevens Ditch . . . . .	2.75	100	5	600	21	30	300	16		
Ball Ditch . . . . .	1.50	80	1.50	60	10			10		
Houston Ditch . . . . .	2	47	3	100	15			15		
Green Meadow Ditch . . . . .	.50	30	1.50	80				70		
Locust Grove Ditch . . . . .	.75	30	.75	40	28			2.50		

	24	212	30	5,000	350	200	25	382	498
Platte Water Company's Ditch . . . . .									
Platte Cañon Ditch . . . . .	9	226	29	1,050	100	320	90	520	
Garber Creek No. 1 . . . . .	34	40	.50	60	10			20	
† Rough and Ready Ditch and Mill Race . . . . .									
Nevada Ditch . . . . .	6.50	220	25	1,362	500	520	45	250	
Petersburg Company's Ditch . . . . .									
Spring Creek Ditch . . . . .	1.50	50	1	200	8		120	3	
Brown Ditch . . . . .	2.50	200	2	400	100	30	20	175	
Hayland Ditch . . . . .	1	40	.50	100	30		25	30	
Fifty-Nine Ditch No. 2 . . . . .	1.25	75	2	75	40			10	
Chatham Ditch . . . . .	.50	100	.50	75	45	15			
‡ Meadow Ditch . . . . .	1.50	30							
§ Sunny Bank Ditch . . . . .	.75	30	.50	20		12			
Kelly Ditch . . . . .	1.50			75					
Craig Ditch . . . . .	1	100	1.50	30	10			15	
Pleasant Park Ditch . . . . .	3.50	170	2	115			100	8	
¶ Ditch of Willis Bryant . . . . .	.50			40					
** Kountz Ditch . . . . .	1.50			70					
Glen Plym Ditch . . . . .	.25		.33	10				2	
Slizell Ditch . . . . .	2	40	1	150			60	50	

\* Is as far as I can ascertain Bear Creek, a tributary of West Plum.

† Running into reservoir.

‡ Not in use now.

§ Practically not used this year on account of scarcity of water.

¶ Not used this year.

\* Not used this year; corn the crop raised the cause given.

\*\* Does not seem to be in use now.

COMMISSIONER'S REPORT, A. D. 1890—Continued.

[illegible]

2 Not used this year on account of want of water. Not decreed.  
Not decreed.

\* Storage.  
† Not used this year  
‡ Not used on account of scarcity of water.



## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
*Allison Ditch No. 2 . . . . .	.25	200	.25	25	20	5			
Barnes and Allison Ditch . . . . .	2.50	170	1	160		160			
H. Brackett Ditch . . . . .	.50	100	1	75	2	50			
Bloom Ditch . . . . .	1	200	1	15		2	8		
Eggleson and Lipps Ditch . . . . .	1.50	40	.50	60	12	38	10		
Keystone Ditch . . . . .	.75	50	1.50	100	36				
Ratcliffe Plum Creek Ditch . . . . .	2	60	2	50	4	4	22		
The McLeod Ditch . . . . .	.25	20	.50	12			7		
The Indian Creek Ditch . . . . .	.75	30					3		
†Ditch of Chas. T. Newmarch . . . . .	.75								
Cann Ditch No. 1 . . . . .	.50	60	.50	15			10		
Purdy Ditch . . . . .	2.25	75	.50	12	12				
Dakan Ditch . . . . .	2.25	60	.50	50	3		45		
The West Ditch . . . . .	.75	75	1	60		60			

The High Line Ditch.	5	50	8	450	40	40	100	80	
Garber Creek No. 2.	.50	60	.50	75	10	10		14	
Stewart Ditch	.50	75	.50	25	10		5		
Sobey Ditch	.75	120	.50	20	12				
Birmingham Ditch.	2	100	.50	75			75		
The Burrows Ditch	2.25	100	5	50	32		5		
George Dane Ditch.	.50	75	2	80	30		25		
Perry Ditch	.75	100	1	50				20	
Crawford Ditch.	2.50	100	3.50	350	15		200	50	
Cann Ditch No. 2.	1	60	.50	20	4			6	
Goodrich Ditch.	1.50	150	2	75			75	50	
† Upton T. Smith Ditch.	1								
‡ The Deer Creek Cañon Ditch and Reservoir	2.50	70	2.50	250	60	15			
The Northern Colo. Irrigation Co.'s Ditch	45	126	146.82	30,000	3,600	1,800	58	1,900	200
The Shore Ditch	1.50								
The East Side Ditch	.75	100	.50	50			15	20	
The Little Daisy Ditch	.50	100	.33	25		5	15		
The Monroe Ditch	2	50	1	100	15		80		
Totals in district	267		341.19	49,684	6,495	3,427	3,918	4,759.50	758
									15,077

\* Not decreed.

† Not used this year on account of scarcity of water.

‡ Not used on account of scarcity of water this summer.

† Not used on account of scarcity of water.

‡ Partly irrigated from ditch and partly from reservoir.

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 8, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, NOT HERETOFORE PUBLISHED.

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE.				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
John Bell. . . . .	620	3½	470	400	475	525		Sec. 33, T. 4 S., R. 68 W.	10	
U. P. R. R. . . . .	623	{ 5½ 4½	{ 250 373	262	355	575		Sec. 33, T. 3 S., R. 68 W.		
W. A. H. Loveland . . . .	355			200	340			NE ¼ Sec. 1, T. 4 S., R. 68 W.		Pump, 50 feet
Artesian Ice Co. . . . .	636			310	600			Sec. 4, T. 4 S., R. 68 W.	Small	
Villa Park . . . . .				200	400	500		Sec. 7, T. 4 S., R. 68 W.		Pump, 50 feet
J. L. Killie . . . . .	360	3½	300					Sec. 7, T. 4 S., R. 68 W.		Pump, 100 feet
University Park . . . . .	740							Sec. 25, T. 4 S., R. 68 W.		
A. C. Fisk . . . . .	700							Sec. 26, T. 4 S., R. 68 W.		Not used
Rosedale . . . . .	627	3½	627	320	480	620		Sec. 27, T. 4 S., R. 68 W.	7	
Jacob Jones . . . . .	125							Sec. 34, T. 4 S., R. 68 W.	9	
J. H. Nichol . . . . .	450	{ 3 2	{ 345	160	370	450		Sec. 1, T. 5 S., R. 68 W.	180	
Charles Moore . . . . .	675	3	650	350	650			Sec. 3, T. 5 S., R. 68 W.	2	
Thomas Skerritt . . . . .	640	2½	600	350	450	620		Sec. 3, T. 5 S., R. 68 W.	5	

Joseph Brown	550	3½	250	250	450	530	579	Sec. 4, T. 5 S., R. 68 W.	25	
Adolph Candler	650	3½	550	350	450	530		Sec. 4, T. 5 S., R. 68 W.	25	
Adolph Candler	720	4½ 2½	620	346			579	Sec. 4, T. 5 S., R. 68 W.	10	
Peter Magnes	806	2½	675	450	560	675	700	Sec. 4, T. 5 S., R. 68 W.	12	
Mrs. B. Magnes	580			350	580			Sec. 4, T. 5 S., R. 68 W.	20	
Jacob Puff	500	3½	500	350	447	500		Sec. 4, T. 5 S., R. 68 W.	10	
Wm. R. Smith	800	3	660	200	670			Sec. 4, T. 5 S., R. 68 W.		
Charles E. Wynall	600	2½	580	250	350	465		Sec. 4, T. 5 S., R. 68 W.	30	
Joseph Flayter	550			216	550			Sec. 5, T. 5 S., R. 68 W.	10	
A. W. Rucker	800	4½	450	450				Sec. 7, T. 5 S., R. 68 W.		
A. W. Rucker	650	5½	600	450	650			Sec. 7, T. 5 S., R. 68 W.		
S. W. Brown	616	2½	510	215	310	435	605	Sec. 8, T. 5 S., R. 68 W.	30	
Brown Bros.	710	3	640	450	640			Sec. 11, T. 5 S., R. 68 W.	45	
Pareka Farm	710							Sec. 11, T. 5 S., R. 68 W.	60	
D. M. Richards	725	3	660	450	718			Sec. 12, T. 5 S., R. 68 W.	70	
Culler, B. H. & C.	710			350	450	640		Sec. 12, T. 5 S., R. 68 W.	45	
Oscar Letow	550	3½	450	455	525			Sec. 15, T. 5 S., R. 68 W.	30	
Fred Bemis	375	3½ 2½	350	177	310	350		Sec. 16, T. 5 S., R. 68 W.	15	
J. G. Lilley	810			177	310	350		SW¼ sec. 16, T. 5 S., R. 68 W.	1	
J. B. Mayers, No. 1.	510							Sec. 16, T. 5 S., R. 68 W.	25	Temperature, 61 degrees
J. B. Mayers, near R. R.	375			175	250	350		Sec. 16, T. 5 S., R. 68 W.	25	
J. B. Mayers, No. 3.	265			240				Sec. 16, T. 5 S., R. 68 W.	15	

## STATEMENTS CONCERNING ARTESIAN WELLS—Continued.

NAME OF OWNER OF WELL.	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION.	Present flow in gallons per minute	REMARKS.
				First flow	Second flow	Third flow	Fourth flow			
J. B. Mayers No. 4 . . . . .	520	None	72	72	350	500	510	Sec. 16, T. 5 S., R. 68 W. . . .	9	Mineral
F. W. Shuckart . . . . .	601	None	250	250	350	500	580	Sec. 16, T. 5 S., R. 68 W. . . .	10	
H. H. Shepard . . . . .	500	2½	430	430	250	440	490	SW ¼ Sec. 16, T. 5 S., R. 68 W	2	
W. G. Sprague . . . . .	540	None	250	250	450	520	520	NW ¼ Sec. 16, T. 5 S., R. 68 W	6	
Stark Nursery Co. No. 1 . .	730	3½ 2½	730	345	450	650	650	Sec. 16, T. 5 S., R. 68 W. . . .	3	
Stark Nursery Co. No. 2 . .	750	5½ 4½	750	350	450	630	630	Sec. 16, T. 5 S., R. 68 W. . . .	5	
David Linhart . . . . .	560	None	250	250	350	540	540	Sec. 17, T. 5 S., R. 68 W. . . .	8	
J. B. Mayers . . . . .	243	2	118	70	240	350	350	Sec. 17, T. 5 S., R. 68 W. . . .	20	
J. B. Mayers No. 2 . . . . .	510	3	150	350	450	500	500	Sec. 17, T. 5 S., R. 68 W. . . .	25	Hotel well
J. B. Mayers No. 3 . . . . .	520	3½	520	70	250	350	350	Sec. 17, T. 5 S., R. 68 W. . . .	10	
Chauncy Olmsted . . . . .	510	2½	440	90	250	450	500	Sec. 17, T. 5 S., R. 68 W. . . .	8	
C. B. Patterson . . . . .	600	3½	300	210	350	450	560	Sec. 17, T. 5 S., R. 68 W. . . .	10	
Littleton school-house . . .	510	3	30	243	350	500	500	SE ¼ Sec. 17, T. 5 S., R. 68 W	5	
David Linhart . . . . .	440	2½	400	250	420	500	500	Sec. 18, T. 5 S., R. 68 W. . . .	10	
Chas. E. Hill . . . . .	467	3½	248	254	281	314	333	Sec. 19, T. 5 S., R. 68 W. . . .	20	

Robert Spottswood	500	4	180	190	250	350	.....	Sec. 19, T. 5 S., R. 68 W. ....	20	.....	.....
J. W. Bowles	378	2	378	112	378	.....	.....	NW. ¼ Sec. 20, T. 5 S., R. 68 W. ....	4	.....	.....
J. W. Bowles	525	.....	.....	150	.....	.....	.....	Sec. 20, T. 5 S., R. 68 W. ....	9	.....	.....
J. W. Bowles	385	.....	.....	.....	.....	.....	.....	Sec. 20, T. 5 S., R. 68 W. ....	31	.....	.....
David Linhart	480	.....	.....	475	.....	.....	.....	Sec. 20, T. 5 S., R. 68 W. ....	15	.....	.....
C. R. Gallup	536	.....	.....	.....	.....	.....	.....	Sec. 21, T. 5 S., R. 68 W. ....	10	.....	.....
Mrs. G. H. Elliott	580	2½	.....	500	.....	.....	.....	Sec. 21, T. 5 S., R. 68 W. ....	8	.....	Temperature 62 degrees
J. B. Mayers No. 4	530	3½	510	350	450	500	.....	Sec. 21, T. 5 S., R. 68 W. ....	5	.....	Temperature 62½ degrees
J. B. Mayers	635	.....	.....	.....	.....	.....	.....	Sec. 21, T. 5 S., R. 68 W. ....	10	.....	Temperature 62½ degrees
Geo. J. Burnett	547	2½	520	350	520	.....	.....	NE. ¼ Sec. 22, T. 5 S., R. 68 W. ....	50	.....	.....
W. W. Chapman	440	.....	.....	.....	.....	.....	.....	Sec. 22, T. 5 S., R. 68 W. ....	20	.....	.....
Peter Magnes	258	None	.....	250	.....	.....	.....	Sec. 24, T. 5 S., R. 68 W. ....	10	.....	.....
Geo. J. Burnett	540	2½	.....	520	.....	.....	.....	Sec. 28, T. 5 S., R. 68 W. ....	50	.....	.....
H. H. Curtis, Sr	342	2½	340	340	.....	.....	.....	SW. ¼ Sec. 28, T. 5 S., R. 68 W. ....	5	.....	.....
H. H. Curtis, Jr	328	2½	328	250	300	.....	.....	NW. ¼ Sec. 28, T. 5 S., R. 68 W. ....	20	.....	.....
John Curtis	630	2½	550	250	300	600	.....	NW. ¼ Sec. 28, T. 3 S., R. 68 W. ....	5	.....	.....
R. H. Nelson	.....	.....	.....	213	350	450	520	Sec. 28, T. 5 S., R. 68 W. ....	10	.....	.....
Levi Palmer	301	.....	.....	267	285	.....	.....	Sec. 29, T. 5 S., R. 68 W. ....	9	.....	.....
Frank Cayley	.....	.....	.....	.....	.....	.....	.....	Sec. 30, T. 5 S., R. 68 W. ....	.....	.....	.....
Peter Magnes	365	.....	.....	200	.....	.....	.....	Sec. 30, T. 5 S., R. 68 W. ....	36	.....	.....
Peter Magnes	258	.....	.....	255	.....	.....	.....	Sec. 30, T. 5 S., R. 68 W. ....	12	.....	In river bottom, very cold
Dr R. F Price	.....	.....	.....	.....	.....	.....	.....	Sec. 33, T. 5 S., R. 68 W. ....	.....	.....	Casing insufficient, no flow



## STATEMENTS CONCERNING ARTESIAN WELLS—Concluded.

NAME OF OWNER OF WELL.	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
J. M. Fox . . . . .	597	2½	218	218	...	...	...	Sec. 6, T. 6 S., R. 68 W. . .	10	...
J. H. Pearce . . . . .	442	3	440	80	440	...	...	Sec. 34, T. 6 S., R. 68 W. . .	30	...
George Manhart . . . . .	710	2½	650	...	...	...	...	Sec. 14, T. 7 S., R. 68 W. . .	...	Pump, 75 ft.—inexhaustible
A., T. & S. F. R. R. . . . .	740	5	200	350	450	600	700	Sec. 14, T. 7 S., R. 68 W. . .	...	Pump, 150 feet
— Jones . . . . .	1,440	...	...	250	...	...	...	Sec. 36, T. 7 S., R. 68 W. . .	...	...
Ed. L. Chatfield . . . . .	365	3½	65	175	250	...	...	Sec. 1, T. 6 S., R. 69 W. . .	7	...
William Shellabarger . . . . .	630	2½	70	310	...	...	...	Sec. 11, T. 6 S., R. 69 W. . .	¼	...
A., T. & S. F. R. R. . . . .	540	5	200	500	...	...	...	Larkspur, T. 9 S., R. 67 W. . .	...	Pump, 116 feet
H. W. Cottrell . . . . .	600	3½ 2½	200 200	250 250	580	...	...	Arapahoe county . . . . .	2	...
H. B. Curtis . . . . .	550	2½	500	250	525	...	...	Arapahoe county . . . . .	5	...
Thomas Fitzgerald . . . . .	750	2½	500	250	350	500	730	Arapahoe county . . . . .	20	...
A. Latham . . . . .	740	3½	650	400	660	720	...	Arapahoe county . . . . .	7	...
John Quinlan . . . . .	900	2	887	887	...	...	...	Douglas county . . . . .	12	...

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 8, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1868, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Little Granger Ditch . . . . .	South Platte river .	Dec. 4, 1888	. . . . .	. . . . .	. . . . . Denver Water and Reservoir Company
The Nuckolls Ditch . . . . .	Dry creek . . . . .	Jan. 7, 1889	Dec. 20, 1888	7	. . . . . E. & G. H. and J. M. & Ezra Nuckolls
Amended statement of the Nuckolls Ditch . . . . .	Dry creek . . . . .	Feb. 7, 1889	Dec. 20, 1888	7	. . . . . E. & G. H. and J. M. & Ezra Nuckolls
The John F. Letner Ditch . . . . .	Plum creek . . . . .	Mar. 28, 1889	May 1, 1887	2	. . . . . John F. Letner
The Middleton Ditch . . . . .	Plum creek . . . . .	Mar. 29, 1889	Mar. 13, 1888	7	. . . . . John Burke
The John F. Letner Ditch, first enlargement . . . . .	Plum creek . . . . .	May 18, 1889	May 14, 1889	18	. . . . . John F. Letner
The Melvin Gardens, Land and Irrigating Company's Ditch . . . . .	{ A well or catch basin }	May 27, 1889	April 10, 1889	Not stated .	. . . The Melvin Gardens, Land and Irrigation Co
The John Stein Ditch . . . . .	Plum creek . . . . .	June 8, 1889	Oct., 1873	13.02	. . . . . John Stein
The Spring Branch Ditch . . . . .	{ A spring branch of E. Cherry creek }	July 29, 1889	April 18, 1889	16	. . . . . Estate of James Russell
The E. Cherry Creek Ditch, No. 1 . . . . .	East Cherry creek .	July 29, 1889	April 18, 1889	9	. . . . . Estate of James Russell
The E. Cherry Creek Ditch, No. 2 . . . . .	East Cherry creek .	July 29, 1889	April 18, 1889	9	. . . . . Estate of James Russell
The Castlewood Ditch . . . . .	Not stated . . . . .	Sept. 4, 1889	Not stated . .	50	(Castlewood Ditch Co.), H. B. Chamberlain & Co
The Fairview Ditch . . . . .	Deer creek . . . . .	Sept. 28, 1889	Aug. 20, 1886	52	. . . . . John C. Bertolette
The Schutz Ditch . . . . .	Russellville gulch .	Jan. 7, 1890	. . . . . 1872	2	. . . . . Jacob Schutz

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Linhart Ditch No. 5 . . . . .	Dad Clark gulch. . . . .	Feb. 15, 1890	Aug. 1, 1889	3	Eliza Linhart
The Palmer Lake Ditch . . . . .	Cook creek. . . . .	Mar. 1, 1890	Feb. 21, 1890	20	H. E. Wilson
The North Palmer Lake Ditch . . . . .	Unknown . . . . .	Mar. 1, 1890	Feb. 26, 1890	4	H. E. Wilson
The Izard Ditch . . . . .	Cherry creek . . . . .	April 3, 1890	Mar. 9, 1890	4	Annie M. Izard and John E. Izard
The Arapahoe Canal . . . . .	Cherry creek . . . . .	April 23, 1890	Jan. 25, 1890	140	The Denver Water Storage Company
The North Palmer Lake Ditch or Pipe Line . . . . .	Cook creek. . . . .	May 8, 1890	Feb. 8, 1890	50	W. M. Younger, <i>et al.</i>
				20	
				10	
The Clark Lateral . . . . .	Cherry creek. . . . .	Sept. 20, 1890	Aug. 4, 1890	67.50	The Denver Water Storage Company

# STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 8, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Denver Water and Reservoir Company's Reservoirs. . . . .	No. 1 . . . . .	South Platte and Bear creek. . . . .	Dec. 4, 1888	Sept. 7, 1888	980,062,942	Denver Water and Reservoir Company
	No. 5 . . . . .	Dutch creek . . . . .			223,872,560	
The Windsor Reservoir. . . . .	Dry creek . . . . .	On the stream . . . . .	Aug. 26, 1889	Aug. 17, 1889	92,000	George Able <i>et al.</i>
The Fairview Reservoir . . . . .	Deer creek . . . . .	Fairview ditch . . . . .	Sept. 28, 1889	Not stated . . . . .	Not given	John C. Bertollette
The Waucondah Reservoir . . . . .	Bear Springs cr'k . . . . .	On the stream . . . . .	Oct. 21, 1889	Sept., 1888	5,000,000	Redstone Town Land and Mining Company
The Castlewood Reservoir. . . . .	Cherry creek. . . . .	On the stream . . . . .	Feb. 12, 1890	Dec. 2, 1889	229,000,000	Denver Water Storage Co.
The Palmer Lake Park Reservoir.	Cook creek. . . . .	Palmer Lake park . . . . .	Mar. 1, 1890	Feb. 21, 1890	50,000,000	H. E. Wilson
The North Palmer Lake Reservoir . . . . .	Name unknown . . . . .	No. Palmer Lake. . . . .	Mar. 1, 1890	Feb. 26, 1890	10,000,000	
The North Palmer Lake Reservoirs . . . . .	No. 1 . . . . .	Cook creek. . . . .	May 8, 1890		10,450,000	W. M. Younger <i>et al.</i>
	No. 2 . . . . .	Gard's cañon. . . . .		Feb. 8, 1890	2,100,000	
	No. 3 . . . . .	McClure's cañon. . . . .			2,200,000	

STATEMENT CONCERNING RESERVOIRS—*Concluded.*

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Fairview Reservoir No. 2. . . . .	Deer creek . . . . .	Fairview ditch . . . . .	May 24, 1890	May 15, 1890	5,000,000	. . . . John C. Bertolette
The Fairview Reservoir, enlargement of . . . . .	Not Stated . . . . .	Not given . . . . .	Sept. 20, 1890	Aug. 14, 1890	4,500,000	{ The Castle Rock Water Company
The Casa Grande Reservoir. . . . .	Cherry creek . . . . .	Arapahoe canal . . . . .	Sept. 20, 1890	Aug. 12, 1890	28,000,000	{ . . . . .
The Clark Reservoir . . . . .					30,344,400	

## STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT NO. 8, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON ¼ Sec. T. S. R. W.		Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
43	4	67	.....	8	Earth . . . .	\$ 600 00	10,000,000	Irrigation .	{ Cottonwood & Cherry Creeks by under- ground flume . . . . . Deer creek
SE 10	6	69	900	6	Earth, rock .	500 00	8,000,000	Irrigation .	



## STATEMENTS CONCERNING RESERVOIR SITES

UNIMPROVED, IN DISTRICT NO. 8, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON			Estimated area	Length of dam in feet about	Greatest depth of dam in feet about	Material convenient for construction	Estimated cost	Estimated capacity in cubic feet	Source of supply	REMARKS
¼ Sec.	T. S.	R. W.								
SW 10	6	69	15 acres	900	20	.....	.....	5,000,000	Deer creek.....	.....
SW 10	6	69	.....	.....	.....	.....	.....	.....	Deer creek.....	.....
NW 10	6	69	.....	.....	.....	.....	.....	.....	Deer creek.....	.....

*Water District No. 9*—Frank Ewers, Commissioner, Morrison, Jefferson County.

Mr. Ewers reports for 1889, as having been called out April 22, and continued service for one hundred and seventeen days. He participates in the general complaint of Water Commissioners against poor head-gates and lack of rating flumes. He reports the enforcement of the order against running water in ditches exclusively for domestic uses, as giving general satisfaction, and resulting in a great saving of water.

For 1890, Mr. Ewers reports going on duty April 18, for the purpose of notifying ditch owners to construct proper head-gates and rating flumes, in accordance with instructions of the Superintendent of the Division, and further reports a general compliance on the part of the owners.

Streams were very low during the entire season, Turkey creek drying up entirely June 23, for the first time in years.

No difficulties were encountered in the distribution of water. Total service, one hundred and nineteen days.

Tabulated statement for 1890 is herewith submitted.

## COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION No. 1—DISTRICT No. 9.

NAME OF DITCH	Length thereof in miles.	Number of days water was carried therein.	Average amount of water carried during season of 1890 in cubic feet per second of time.	Number of acres that can be irrigated therefrom.	Number of acres of alfalfa irrigated therefrom.	Number of acres of seeded grasses other than alfalfa irrigated therefrom.	Number of acres of natural grasses irrigated therefrom.	Number of acres of other crops irrigated therefrom.	Number of acres irrigated from seepage.	Total number of acres irrigated in district.
The McBroom Ditch . . . . .	1.50	115	. . . . .	163	43	40	15	35	. . . . .	. . . . .
The Simonton Ditch . . . . .	3.25	121	. . . . .	432	170	32	133	87	. . . . .	. . . . .
The Hodgson Ditch . . . . .	2.25	82	. . . . .	179	10	35	25	49	. . . . .	. . . . .
The Warrior Ditch . . . . .	4.50	149	. . . . .	960	464	143	67	249	. . . . .	. . . . .
The Pioneer Union Ditch . . . . .	3.75	151	. . . . .	660	181	231	47	191	. . . . .	. . . . .
The Olson & Bell Ditch . . . . .	1.25	45	. . . . .	191	9	. . . . .	25	107	. . . . .	. . . . .
The Hindry Ditch . . . . .	3	65	. . . . .	170	134	11	. . . . .	. . . . .	. . . . .	. . . . .
The Lawn Ditch . . . . .	.75	9	. . . . .	10	. . . . .	. . . . .	. . . . .	5	. . . . .	. . . . .
The Spickerman Ditch . . . . .	1	30	. . . . .	45	12	. . . . .	33	. . . . .	. . . . .	. . . . .
The Lewis & Strouse Ditch . . . . .	3	72	. . . . .	152	122	. . . . .	. . . . .	30	. . . . .	. . . . .
The Strouse Ditch . . . . .	.50	14	. . . . .	20	. . . . .	15	. . . . .	. . . . .	. . . . .	. . . . .
The Spickerman Lower Ditch . . . . .	.75	7	. . . . .	15	15	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

The Spickerman Middle Ditch. . . . .	.75	8	. . . . .	20	12	. . . . .	8	. . . . .	. . . . .
The Arnett Ditch. . . . .	9	119	. . . . .	1,272	614	195	210	253	. . . . .
The Churn Ditch. . . . .	.75	18	. . . . .	7	7	. . . . .	. . . . .	. . . . .	. . . . .
The Fischer Ditch. . . . .	1	3	. . . . .	37	4	8	. . . . .	25	. . . . .
* The Bergen Ditch. . . . .	3	. . . . .	. . . . .	20	15	. . . . .	. . . . .	5	. . . . .
† The Independent High Line Ditch. . . . .	6	. . . . .	. . . . .	105	. . . . .	. . . . .	40	15	. . . . .
The Ward & Kendrick Ditch. . . . .	14	12	. . . . .	652	215	20	68	100	. . . . .
† The Ewan Ditch. . . . .	.50	. . . . .	. . . . .	7	5	. . . . .	. . . . .	2	. . . . .
The McBroom Transfer Ditch. . . . .	1.75	37	. . . . .	70	40	. . . . .	. . . . .	20	. . . . .
Totals in district. . . . .	65.25	. . . . .	. . . . .	5,509	2,215	742	761	1,193	. . . . .

† No water run in 1890.

\* No water run since April 19, 1890.

## RESERVOIRS.

The Harriman Reservoir. . . . .	. . . . .	. . . . .	. . . . .	721	280	36	25	304	. . . . .
The Bergen Reservoirs, Nos. 1 and 2. . . . .	. . . . .	. . . . .	. . . . .	600	94	22	10	292	. . . . .
The Bowles Reservoirs, Nos. 3 and 4. . . . .	. . . . .	. . . . .	. . . . .	1,150	100	50	150	300	. . . . .
The W. C. Henry Reservoir. . . . .	. . . . .	. . . . .	. . . . .	332	120	. . . . .	. . . . .	212	. . . . .
The N. B. Coy Reservoir. . . . .	. . . . .	. . . . .	. . . . .	85	40	45	. . . . .	. . . . .	. . . . .
The H. W. Lake Reservoirs, Nos. 1, 2, 3 & 4. . . . .	. . . . .	. . . . .	. . . . .	228	133	65	. . . . .	30	. . . . .
The Kendrick Reservoir No. 1. . . . .	. . . . .	. . . . .	. . . . .	120	20	20	. . . . .	80	. . . . .

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF RESERVOIR				Number of acres that can be irri- gated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated there- from	Number of acres of natural grasses irrigated there- from	Number of acres of other crops irri- gated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Kendrick Reservoir No. 2 . . . . .	..	..	..	160	50	30	.	75	..	..
The Kendrick Reservoir No. 3 . . . . .	..	..	..	160	60	..	..	100	..	..
The Morgan Supply Company's Reservoirs:										
Deane . . . . .	..	..	..	225	125	..	..	100	..	..
*Johnson . . . . .	..	..	..	120	..	..	..	100	..	..
*Grant . . . . .	..	..	..	120	43	..	..	..	..	..
No. 6 . . . . .	..	..	..	10	..	..	..	10	..	..
No. 7 . . . . .	..	..	..	80	..	..	..	80	..	..
Totals in district . . . . .	..	..	..	4,111	1,065	268	185	1,683	..	4,911

\* Filled from Morgan Supply Company's Ditch.

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 9. RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL.	Total depth thereof in feet	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in Gallons per minute	REMARKS.
				First flow	Second flow	Third flow	Fourth flow			
Joseph Hodgson . . . . .	75	.	.	.	.	.	.	.	1 $\frac{1}{2}$	.
Howard . . . . .	300	.	41	.	.	.	.	.	5	.
Holyoke & McBroom . . . . .	613	.	50	.	.	.	.	.	.	.. Well has failed
Isaac McBroom . . . . .	190	.	.	.	.	.	.	.	4	.
John McBroom . . . . .	200	.	135	.	.	.	.	.	6	.



## STATEMENT CONCERNING DITCHES

IN DISTRICT No. 9, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL,	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Ward Ditch, enlargement of .	Bear creek . . . . .	Dec. 3, 1888	March 1, 1888	18.35	W. S. Ward <i>et al</i>
The Knight Ditch . . . . .	Bear creek . . . . .	May 23, 1889	June 25, 1879	8	James Knight
The Arnett and Harriman Ditch, } third enlargement of . . . . .	Bear and Turkey } creeks . . . . .	July 29, 1889	April 30, 1889	138.20	Joseph W. Bowles
The Bear Ditch . . . . .	Turkey creek . . . . .	Dec. 4, 1888	Sept. 7, 1888	174.70	
The Arnett Ditch, enlargement of }				316.50	Denver Water & Reservoir Company
The Cub Ditch . . . . .	Bear creek . . . . .	Dec. 4, 1888	Sept. 7, 1888	322.29	
The Feeder Ditch . . . . .				60.03	
The Arnett Ditch, enlargement of	Bear creek . . . . .	March 4, 1889	Dec. 5, 1889	102	The Arnett Ditch Company
The Mount Vernon Supply Ditch .	Mt. Vernon gulch .	May 27, 1890	May 26, 1890	27.85	Robert A. Strain

# STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 9, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Kendrick Reservoir . . . . .	Bear Creek . . . . .	Ward Ditch . . . . .	Dec. 1, 1888	Oct 28, 1888	14,472,340	W. S. Ward, <i>et al</i>
{ The Denver Water Company's Reservoirs No. 1. . . . . No. 2 . . . . . No. 3 . . . . . No. 4 . . . . .	South Platte (district 23)	Little Granger . . . . .			980,062,942	
	Bear and Turkey Creeks . . . . .	Bear, Arnett, Cub and Feeder Ditches . . . . .	Dec. 4, 1888	Sep. 7, 1888	371,944,970	Denver Water and Reservoir Company
					85,550,957	
					12,949,081	
The W. C. Henry Reservoir . . . . .	Bear Creek . . . . .	Arnett Ditch . . . . .	Dec. 21, 1888	. . . 1874-1888	9,900,000	W. C. Henry
{ The Inter-laken Reservoirs No. 1 . . . . . No. 2 . . . . . No. 3 . . . . .				Winter '80-81	2,189,280	
	Bear and Turkey Creeks . . . . .	Arnett Ditch . . . . .	Feb. 22, 1889	April, 1886	789,525	N. B. Coy
				March, 1886	615,502	
{ The Ward Reservoir No. 5 Enlargement of same . . . . .	Bear Creek and Clear Creek (district 7) . . . . .	Ward Ditch and Agricultural (in 7) . . . . .	May 14, 1889	April, 1883	9,429,800	Wm. S. and Jasper D. Ward
				Feb. 28, 1889	6,420,000	
{ The Bowles Reservoirs No. 1 . . . . . No. 2 . . . . . No. 3 . . . . .	Bear and Turkey Creeks . . . . .	Arnett and Harriman Ditch . . . . .	July 29, 1889	Apr. 30, 1889	165,000,000	Joseph W. Bowles
					Not given	
					Not given	
The Harriman Lake (so called) . . . . .	Bear Creek . . . . .	Arnett Ditch . . . . .	March 4, 1890	Dec. 5, 1889	54,000,000	Geo. W. Harriman

## STATEMENT CONCERNING RESERVOIRS—Concluded.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The W. C. Henry Reservoir	Bear Creek	Arnett Ditch	March 4, 1890	Dec. 5, 1889	9,900,000	W. C. Henry
The Stickford Reservoir	Bear Creek	Arnett Ditch	March 4, 1890	Dec. 5, 1889	3,575,000 183,750	J. D. Stickford
Henry W. Lake's Reservoirs	Bear Creek	Arnett Ditch	March 4, 1890	Dec. 5, 1889	13,939,200 3,920,400 653,400	H. W. Lake
H. B. Coy's Reservoirs	Bear Creek	Arnett Ditch	March 4, 1890	Dec. 5, 1889	1,306,800 2,189,280 653,400	H. B. Coy
Bowles Lake (so called)	Bear Creek	Arnett Ditch	March 4, 1890	Dec. 5, 1889	1,306,800 165,000,000	Joseph W. Bowles
Bowles No. 2 Reservoir No. 2	Bear Creek	Arnett Ditch	March 4, 1890	Dec. 5, 1889	8,712,000 5,227,000	

*Water District No. 23*—M. R. Hanlin, Commissioner, Fairplay, Park county.

Mr. Hanlin was called out May 15, 1890, and continued in service until November 3, a total of one hundred and twenty-one days, and employed an assistant five days.

He reports an abundance of water from all ditches, excepting some diverting from Jefferson, Tarryall and Four Mile creeks, the greatest scarcity being in Jefferson creek.

Mr. Hanlin has a large district, and two hundred and nine ditches to regulate.

He reports seventy-seven thousand one hundred and twenty-three acres irrigated from three hundred and one and one-half miles of ditches, all of which amount, excepting about two hundred and fifty acres, was in natural grasses. He expresses the opinion that water is decreed to the ditches largely in excess of their capacities, and suggests an official measurement of all ditches and lands irrigated under the same; also, that a certain quantity of water, to be fixed by law, be allowed to each one hundred acres, not exceeding the quantity decreed to each ditch.

Following will be found his statistical statement for 1890:

## COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION No. 1—DISTRICT No. 23.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated, therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Beery Ditch . . . . .	3	65	. . . . .	600	. . . . .	. . . . .	600	. . . . .	. . . . .	. . . . .
The Trout Creek Ditch . . . . .	4.50	71	. . . . .	1,000	. . . . .	. . . . .	1,000	. . . . .	. . . . .	. . . . .
The Borden Ditch . . . . .	3.25	90	. . . . .	400	. . . . .	. . . . .	384	16	. . . . .	. . . . .
The Crosier Ditch . . . . .	1	90	. . . . .	25	. . . . .	. . . . .	25	. . . . .	. . . . .	. . . . .
The Mill Ditch . . . . .	.75	95	. . . . .	50	. . . . .	. . . . .	50	. . . . .	. . . . .	. . . . .
The Guiraud Ditch . . . . .	.60	85	. . . . .	800	. . . . .	. . . . .	800	. . . . .	. . . . .	. . . . .
The Cañon Ditch . . . . .	1.75	85	. . . . .	600	. . . . .	. . . . .	600	. . . . .	. . . . .	. . . . .
The Small Ditch . . . . .	.40	85	. . . . .	60	. . . . .	. . . . .	60	. . . . .	. . . . .	. . . . .
The Four Mile Creek Ditch . . . . .	2.75	95	. . . . .	400	. . . . .	. . . . .	400	. . . . .	. . . . .	. . . . .
The Prince Ditch . . . . .	4	85	. . . . .	1,000	. . . . .	. . . . .	1,000	. . . . .	. . . . .	. . . . .
The Wilkin Ditch . . . . .	3	90	. . . . .	400	. . . . .	. . . . .	400	. . . . .	. . . . .	. . . . .
The Ratcliff Ditch No. 1 . . . . .	.25	80	. . . . .	12	. . . . .	. . . . .	12	. . . . .	. . . . .	. . . . .
The Hopson Ditch . . . . .	.50	81	. . . . .	120	. . . . .	. . . . .	120	. . . . .	. . . . .	. . . . .

The Rock Creek Ditch . . . . .	1	79	160	160	160	160	160	160	160
The Stevens Ditch No. 1 . . . . .	.10	69	10	10	10	10	10	10	10
The Stevens Ditch No. 2 . . . . .	.10	69	5	5	5	5	5	5	5
The Ratcliff Ditch No. 2 . . . . .	1	80	30	30	30	30	30	30	30
The Miller & Chapman Ditch . . . . .	.50	73	250	250	250	250	250	250	250
The Sigafus Ditch . . . . .	5	89	1,720	1,720	1,720	1,720	1,720	1,720	1,720
The Haver Ditch No. 1 . . . . .	.75	71	60	60	60	60	60	60	60
The Anderson Ditch No. 3 . . . . .	.75	66	450	450	450	450	450	450	450
The Alden & Milligan Ditch . . . . .	1.50	60	360	360	360	360	360	360	360
The Chappella Ditch . . . . .	.375	68	80	80	80	80	80	80	80
The Kister Sweet Ditch . . . . .	2.66 $\frac{2}{3}$	91	730	730	730	730	730	730	730
The Daniel Fyfee Ditch . . . . .	1	84	200	200	200	200	200	200	200
The Stevens Ditch No. 3 . . . . .	.50	69	30	30	30	30	30	30	30
The Reinhardt Ditch No. 1 . . . . .	.75	82	400	400	400	400	400	400	400
The Brownlow & Stevens Ditch . . . . .	2	65	640	640	640	640	640	640	640
The Pruden Ditch . . . . .	.75	60	100	100	100	100	100	100	100
The Troppe Ditch . . . . .	.12 $\frac{1}{3}$	69	25	25	25	25	25	25	25
The Stevens Ditch No. 4 . . . . .	.50	69	30	30	30	30	30	30	30
The Burns & Sessions Ditch . . . . .	2.25	92	760	760	760	760	760	760	760
The Randall & Nicholls Ditch . . . . .	2	90	1,200	1,200	1,200	1,200	1,200	1,200	1,200
The Borden Ditch No. 2 . . . . .	1.25	80	180	180	180	180	180	180	180
The Mary G. Borden Ditch . . . . .	.50	80	35	35	35	35	35	35	35



## COMMISSIONER'S REPORT, A. D. 1890.—Continued.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Demick Ditch . . . . .	1.50	91	...	880	...	...	880	...	...	...
The Fehringer Ditch No. 1 . . . . .	2	88	...	540	...	...	540	...	...	...
The Crozier & Hawthurst Ditch . . . . .	1.50	79	...	200	...	...	200	...	...	...
The Wadley Ditch No. 1 . . . . .	.50	90	...	20	...	...	20	...	...	...
The Wadley Ditch No. 2 . . . . .	2	90	...	175	...	...	175	...	...	...
The Weed Ditch . . . . .	1.25	93	...	150	...	...	150	...	...	...
The Ratcliff Ditch No. 3 . . . . .	1.06 $\frac{1}{4}$	80	...	35	...	...	35	...	...	...
The Parker & Bonis Ditch . . . . .	1.33 $\frac{1}{3}$	78	...	120	...	...	117	3	...	...
The Brubaker Ditch . . . . .	5	91	...	640	...	...	640	...	...	...
The Farnalee & Shoemaker Ditch No. 1 . . . . .	3	89	...	400	...	...	395	5	...	...
The Anderson Ditch No. 2 . . . . .	1.25	82	...	300	...	...	300	...	...	...
* The Saddler Ditch . . . . .	1.33 $\frac{1}{3}$	...	...	940	...	...	...	...	...	...
The Wadley Ditch No. 3 . . . . .	.66 $\frac{2}{3}$	90	...	50	...	...	50	...	...	...
The Baker & Lilley Ditch . . . . .	2.50	89	...	320	...	...	320	...	...	...

The Tarryall Ditch . . . . .	1	94	. . . . .	160	. . . . .	160	. . . . .
The Michigan Ditch . . . . .	.50	87	. . . . .	80	. . . . .	80	. . . . .
The Halthusen Ditch . . . . .	.50	93	. . . . .	40	. . . . .	40	. . . . .
The Dunbar Ditch . . . . .	1.50	87	. . . . .	400	. . . . .	400	. . . . .
The Hawthurst Ditch . . . . .	1	89	. . . . .	100	. . . . .	100	. . . . .
The McManus Ditch . . . . .	1 25	90	. . . . .	100	. . . . .	100	. . . . .
The Holst Ditch No. 1 . . . . .	.12½	76	. . . . .	150	. . . . .	150	. . . . .
The Hubbard Ditch . . . . .	1.50	92	. . . . .	360	. . . . .	360	. . . . .
The Lee Ditch No. 1 . . . . .	.62½	81	. . . . .	40	. . . . .	40	. . . . .
The Parmalee & Shoemaker Ditch No. 3	.60	91	. . . . .	100	. . . . .	100	. . . . .
The Island Ditch . . . . .	.02	78	. . . . .	60	. . . . .	60	. . . . .
The Haver Ditch No. 2 . . . . .	.50	87	. . . . .	80	. . . . .	80	. . . . .
The Balm of Gilead Ditch . . . . .	.75	60	. . . . .	160	. . . . .	160	. . . . .
The Foster Ditch . . . . .	4.33⅓	89	. . . . .	1,160	. . . . .	1,160	. . . . .
The Reinhardt Ditch No. 4 . . . . .	1	86	. . . . .	80	. . . . .	80	. . . . .
The Crozier & Taylor Ditch . . . . .	1.50	91	. . . . .	160	. . . . .	160	. . . . .
The Holst & Packer Ditch . . . . .	1.50	76	. . . . .	200	. . . . .	200	. . . . .
The Milligan Ditch . . . . .	1	89	. . . . .	100	. . . . .	100	. . . . .
The Lee Ditch No. 2 . . . . .	.12½	81	. . . . .	6	. . . . .	6	. . . . .
The Lavack Ditch . . . . .	2.50	93	. . . . .	220	. . . . .	220	. . . . .
The Hot Springs Ditch . . . . .	6.25	93	. . . . .	3,000	. . . . .	3,000	. . . . .

\* Not used this year.

## COMMISSIONER'S REPORT, A. D. 1890--Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Parmelee & Shoemaker Ditch No. 2	1.1	89	.	240	.	.	240	.	.	.
The Central Ditch . . . . .	1.12½	82	.	1,000	.	.	1,000	.	.	.
The Franks Ditch . . . . .	1.5	86	.	260	.	.	260	.	.	.
The Rock Creek Ditch No. 1 . . . . .	.37½	71	.	40	.	.	40	.	.	.
The Lavack Ditch No. 2 . . . . .	1.5	93	.	20	.	.	20	.	.	.
The Fritz Ditch . . . . .	.16½	91	.	280	.	.	280	.	.	.
The Crooked Creek Ditch . . . . .	1	89	.	310	.	.	300	.	.	.
The Ohler Gulch Ditch . . . . .	.75	65	.	75	.	.	75	.	.	.
The Fehringer Ditch No. 2 . . . . .	3.5	89	.	660	.	.	660	.	.	.
The Donovan Ditch . . . . .	1.75	73	.	610	.	.	610	.	.	.
The Harland Ditch . . . . .	4	83	.	400	.	.	400	.	.	.
The Baker Ditch . . . . .	2.5	81	.	300	.	.	300	.	.	.
The Taylor Ditch . . . . .	1.75	82	.	230	.	.	230	.	.	.
The . . . . .	2	77	.	1,470	.	.	1,470	.	.	.

Total . . . . .

Ditch	Acres	Cu Yds.	Feet	Days	Cost
The Binkley Ditch No. 2 . . . . .	.75	'80	60	.. .. .	\$0
The Burlingame Ditch . . . . .	1.75	90	275	.. .. .	275
The Nelson Ditch . . . . .	1	72	160	.. .. .	160
The Main or Hotel Ditch . . . . .	1.5	87	1,090	.. .. .	980
The Thompson & Ratcliff Ditch . . . . .	4	40	320	.. .. .	320
The Holst Ditch No. 2 . . . . .	1	76	195	.. .. .	195
The O'Neil Ditch . . . . .	5	73	360	.. .. .	360
The Rogers North Ditch . . . . .	2.75	77	500	.. .. .	500
The Anchor Ditch . . . . .	1	72	920	.. .. .	920
The Elisha Alden Ditch . . . . .	1.5	77	360	.. .. .	360
The Weed Ditch . . . . .	2	60	400	.. .. .	400
The Cincinnati Ditch . . . . .	3	72	495	.. .. .	495
The Spring Branch Ditch . . . . .	3.25	81	800	.. .. .	800
The Rayner & Edmondson Ditch No. 2 . . . . .	1.5	81	160	.. .. .	160
The Henry Ditch . . . . .	.5	72	40	.. .. .	40
The Binkley Ditch . . . . .	1.75	69	160	.. .. .	160
The W. R. Head Ditch . . . . .	2	73	600	.. .. .	600
The Whitten Ditch . . . . .	3	77	320	.. .. .	320
The Peabody Ditch . . . . .	.5	71	80	.. .. .	80
The Weaver Ditch No. 1 . . . . .	1.25	75	50	.. .. .	50
The Rogers Ditch . . . . .	2.5	69	330	.. .. .	330
The Platte Station Ditch . . . . .	1.75	67	300	.. .. .	300

## WATER COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Slater Ditch . . . . .	5.50	89	..	440	..	..	440	..	..	..
The Dunbar Ditch No. 2 . . . . .	.50	77	..	100	..	..	100	..	..	..
The Petrie Ditch . . . . .	3	89	..	400	..	..	400	..	..	..
The Ratcliff Ditch No. 4 . . . . .	.50	80	..	12	..	..	12	..	..	..
The Holtshusen Ditch No. 1 . . . . .	.25	67	..	40	..	..	40	..	..	..
The Ratcliff Ditch No 5 . . . . .	.6¼	79	..	15	..	..	15	..	..	..
The Parker Ditch . . . . .	3	72	..	480	..	..	480	..	..	..
The Pierce Ditch . . . . .	1.50	68	..	160	..	..	160	..	..	..
The Heely Ditch No. 1 . . . . .	1.37½	61	..	100	..	..	100	..	..	..
The Heely Ditch No. 2 . . . . .	.20	61	..	40	..	..	40	..	..	..
The Session Ditch . . . . .	1.50	72	..	250	..	..	250	..	..	..
The Souders & Wolf Ditch No. 2 . . . . .	.25	62	..	15	..	..	15	..	..	..
The Dunbar Ditch No. 2 . . . . .	1	71	..	140	..	..	140	..	..	..
The Gibson Ditch . . . . .	.50	80	..	100	..	..	100	..	..	..





## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was car- ried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigat'd there- from	Number of acres of alfalfa irri- gated there- from	Number of acres seeded grasses other than al- falfa irrigated therefrom	Number of acres of natural grasses irri- gated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irri- gated in dis- trict
The Little Channel Ditch . . . . .	1.25	71	. . .	100	. . .	. . .	100	. . .	. . .	. . .
The Craig Ditch . . . . .	.50	75	. . .	320	. . .	. . .	320	. . .	. . .	. . .
The Bonnell Ditch . . . . .	1.75	71	. . .	360	. . .	. . .	360	. . .	. . .	. . .
The Rogers South Ditch . . . . .	2	82	. . .	300	. . .	. . .	300	. . .	. . .	. . .
The Weston Ditch . . . . .	3.8	69	. . .	500	. . .	. . .	500	. . .	. . .	. . .
The Ratcliff No. 8 Ditch . . . . .	.50	80	. . .	20	. . .	. . .	20	. . .	. . .	. . .
The Ratcliff No. 9 Ditch . . . . .	.50	73	. . .	20	. . .	. . .	20	. . .	. . .	. . .
The Devine Hill Ditch . . . . .	.333	81	. . .	760	. . .	. . .	760	. . .	. . .	. . .
The East Side Ditch . . . . .	.60	79	. . .	250	. . .	. . .	250	. . .	. . .	. . .
The Park Ditch . . . . .	1.50	73	. . .	120	. . .	. . .	120	. . .	. . .	. . .
The Rayner & Edmondson No. 1 Ditch .	.25	81	. . .	500	. . .	. . .	500	. . .	. . .	. . .
The Mickles Ditch . . . . .	.60	63	. . .	100	. . .	. . .	100	. . .	. . .	. . .
The Rayner & Edmondson No. 5 Ditch..	1-35	81	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
The Rayner & Edmondson No. 3 Ditch	.50	81	. . .	500	. . .	. . .	500	. . .	. . .	. . .

The Litner Ditch. . . . .	.50	83	. . . . .	320	. . . . .	320	. . . . .
The Redman Ditch . . . . .	1.125	71	. . . . .	60	. . . . .	60	. . . . .
The Rayner & Edmondson No. 4 Ditch .	.02	81	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The D. F. Miller Ditch. . . . .	.75	78	. . . . .	180	. . . . .	180	. . . . .
The Four Mile Ditch. . . . .	1.50	71	. . . . .	40	. . . . .	40	. . . . .
The Harrington South Ditch. . . . .	.50	79	. . . . .	600	. . . . .	600	. . . . .
The Rickards Lower Ditch. . . . .	.20	81	. . . . .	50	. . . . .	50	. . . . .
The Sheep Rock Ditch . . . . .	1	10	. . . . .	920	. . . . .	920	. . . . .
The St. Charles Ditch . . . . .	.375	67	. . . . .	50	. . . . .	50	. . . . .
The Dudley Ditch . . . . .	.875	81	. . . . .	60	. . . . .	60	. . . . .
The O'Brien Ditch . . . . .	.75	80	. . . . .	60	. . . . .	60	. . . . .
The Schattinger Ditch . . . . .	.75	63	. . . . .	80	. . . . .	80	. . . . .
The Weaver No. 2 Ditch . . . . .	.375	66	. . . . .	25	. . . . .	25	. . . . .
The W. H. Miller Ditch . . . . .	.50	71	. . . . .	25	. . . . .	25	. . . . .
The Beaver Ditch. . . . .	7	74	. . . . .	960	. . . . .	960	. . . . .
The Rebecca Ditch. . . . .	.375	72	. . . . .	50	. . . . .	50	. . . . .
The Park Gulch Ditch . . . . .	.25	64	. . . . .	30	. . . . .	30	. . . . .
The Harland Extension Ditch . . . . .	.333	60	. . . . .	40	. . . . .	40	. . . . .
The Lee No. 3 Ditch . . . . .	.625	61	. . . . .	10	. . . . .	10	. . . . .
The Mexican Ditch. . . . .	1	72	. . . . .	200	. . . . .	200	. . . . .
The Lee No. 4 Ditch . . . . .	.75	61	. . . . .	10	. . . . .	10	. . . . .
The Chubb Ditch. . . . .	3.50	. . .	. . . . .	1,500	. . . . .	1,500	. . . . .

COMMISSIONER'S REPORT, A. D. 1890—*Concluded.*

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Kenosha Ditch . . . . .	2	71	..	648	..	..	648	..	..	..
The Harrington and Richards Ditch .	6.0625	74	..	2,000	..	..	1,985	15	..	..
The Nelson High Creek Ditch . . . .	.75	50	..	120	..	..	120	..	..	..
The McCartney Ditch . . . . .	5	73	..	940	..	..	940	..	..	..
The Link Ditch . . . . .	1.75	84	..	700	..	..	700	..	..	..
The Island Ditch . . . . .	.875	81	..	100	..	..	100	..	..	..
The Hartsell Four-Mile Ditch . . . .	1.125	72	..	350	..	..	350	..	..	..
The W. R. Head No. 2 Ditch . . . . .	.25	77	..	10	..	..	10	..	..	..
The Montag and Truax Ditch . . . .	1.50	83	..	320	..	..	320	..	..	..
The Alkiline Ditch . . . . .	1.0625	72	..	140	..	..	140	..	..	..
The Peabody No. 3 Ditch . . . . .	1	65	..	100	..	..	100	..	..	..
The Souders and Wolf No. 4 Ditch . .	.20	63	..	20	..	..	20	..	..	..
The Sacramento Ditch . . . . .	2.25	71	..	840	..	..	830	.10	..	..
The Como Jim Ditch . . . . .	.25	83	..	500	..	..	500	..	..	..

The Haven No. 2 Ditch . . . . .	1.33½	79	240	240	240	240	240	240	240
The Pearl Lower Ditch . . . . .	.60	73	40	40	40	40	40	40	40
The Ditch . . . . .	.50	86	100	100	100	100	100	100	100
The Souders and Wolf No. 6 Ditch . .	1.59	67	250	250	250	250	250	250	250
The Souders and Wolf No. 3 Ditch . .	.33½	63	20	20	20	20	20	20	20
The Souders and Wolf No. 5 Ditch . .	.33½	63	20	20	20	20	20	20	20
The Trevan Upper Ditch . . . . .	.40	69	80	80	80	80	80	80	80
The John Radford Ditch . . . . .	1.20	64	600	600	600	600	600	600	600
The Trevan Lower Ditch . . . . .	.078	69	80	80	80	80	80	80	80
The Weaver No. 3 Ditch . . . . .	.75	71	40	40	40	40	40	40	40
The W. H. Miller Ditch . . . . .	.50	81	25	25	25	25	25	25	25
The Burlingame No. 2 Ditch . . . . .	.25	68	40	40	40	40	40	40	40
The Burlingame No. 3 Ditch . . . . .	.25	68	40	40	40	40	40	40	40
The Pearl Upper Ditch . . . . .	1.0625	73	70	70	70	70	70	70	70
The Hubbard No. 2 Ditch . . . . .	.375	37	80	80	80	80	80	80	80
The Jefferson Lake Ditch . . . . .	9	37	8,000	8,000	8,000	8,000	8,000	8,000	8,000
The Ohler Ditch . . . . .	.50	37	320	320	320	320	320	320	320
Totals in district . . . . .	292.0885	77,013	75,542	139	75,681	75,681	75,681	75,681	75,681

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 23, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE YET BEEN ISSUED.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT.
The Gibbs Ditch. . . . .	Marvin creek . . . . .	Jan. 15, 1889	Oct. 26, 1888	17.50	Arthur W. Gibbs
The Brookside Ditch . . . . .	Clay creek . . . . .	May 4, 1889	April 20, 1889	18	M. Caffrey and J. H. Crowell
The Park Ditch. . . . .	Hildebrandt creek . . . . .	May 4, 1889	April 20, 1889	18.30	M. Caffrey and J. H. Crowell
The Alderbrook Ditch . . . . .	Alderbrook . . . . .	Aug. 3, 1889	July 15, 1889	1.43	Wm. Garsten and Frederick W. Hartley
The Manitou Park Water System Ditch No. 1 . . . . .	Loys creek. . . . .	Aug. 25, 1889	May 27, 1889	1	W. H. Hoagland, <i>et al.</i>
The Manitou Park Water system Ditch No. 2 . . . . .	E. & W. branches of Trout creek. . . . .	Aug. 26, 1889	May 27, 1889	.80	W. H. Hoagland, <i>et al.</i>
The East Ditch. . . . .	Elk creek . . . . .	Oct. 2, 1889	April, 1880	7.50	Mary E. Emmitt, <i>et al.</i>
The West Ditch . . . . .	Tarryall creek . . . . .	Oct. 7, 1889	Sept. , 1888	4.12	Wilhelm Holthusen
The Standering Ditch . . . . .	Trout creek . . . . .	Oct. 9, 1889	June, 1882	6.20	Charles Wheeler
The Holthusen Ditch . . . . .	Unnamed creek . . . . .	Oct. 14, 1889	Oct. 2, 1889	6	W. H. Funk
The Wheeler Ditch, No. 1 . . . . .	Salt creek . . . . .	Oct. 14, 1889	Oct. 2, 1889	6	W. H. Funk
The Spring Ditch . . . . .	Unnamed creek . . . . .	Oct. 14, 1889	Oct. 2, 1889	4	W. H. Funk
The Salt Creek Ditch . . . . .	Trout creek . . . . .	Oct. 24, 1889	Not stated	4.60	Geo. W. Barron
The Funk Ditch . . . . .					
The Valley Meadow Ditch. . . . .					

The Valley Meadow Ditch.	Trout creek.	Oct. 24, 1889.	Not started.	4.00	Geo. W. Burton
The Fremont Ditch . . . . .	Tarryall creek . . . . .	Nov. 7, 1889	Spring, 1887	45	Samuel Lasell
The Lower Kenosha Ditch . . . . .	Kenosha gulch. . . . .	Nov. 25, 1889	Oct. 1, 1889	25	M. F. Case and S. S. Caruthers
The Citizens Water Company's Feed Pipe Lines . . . . .	N. & S. forks of S. Platte river. } . . . . .	Dec. 28, 1889	Oct. 1, 1889	90	The Citizens Water Company
Taylor's Jefferson Creek Ditch . . . . .	Jefferson creek. . . . .	July 14, 1890	June 13, 1890	8	Samuel Taylor
The Deadman's Gulch Ditch . . . . .	Deadman's gulch } . . . . .			28	
The Beaver Gulch Ditch. . . . .	Beaver gulch. . . . .			24	
The Inlet Ditch . . . . .	Guernsey gulch. } . . . . .	July 24, 1890	July 15, 1889	55	David Baker, James Moynahan and Williard R. Head
The Baker Outlet Ditch . . . . .	Baker reservoir . . . . .			17	
The Main Outlet Ditch . . . . .	Baker reservoir . . . . .			37	
The Tom Withers Ditch or Pipe Line	A spring . . . . .	July 31, 1890	July 3, 1885	.99	Thomas Withers
Extension of The Boynton } No. 1. Ditch . . . . . } No. 2.	Rule creek . . . . .	Sept. 13, 1890	June 9, 1890	3	Daniel Staffa
The Waterfall Ditch, No 1. . . . .			June 18, 1876	3	
The Waterfall Ditch, No. 2 . . . . .	Waterfall gulch . . . . .		June 18, 1876	12	
The Waterfall Ditch, No. 3 . . . . .		Sept. 13, 1890	June 18, 1876		
The Fern Ditch . . . . .	Fern gulch. . . . .		Mar. 5, 1884	8	Charlotte Higginson
The Buttress Ditch . . . . .	Buttress gulch . . . . .		May 10, 1884	8	
The Spring Gulch Ditch. . . . .	Spring gulch. . . . .		June 13, 1878	5	
The Mendenhall Ditch . . . . .	Mendenhall creek . . . . .	Oct. 15, 1890	. . . . .	12	Castle Lake Resort Company



## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 23, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Lake Antero Reservoir. . .	South Platte river . .	On the stream . .	Feb. 8, 1889	Nov. 15, 1888	2,214,323	{ C. M. Coover, Gordon Land et al.
The Citizens' Water Comp'y's Reservoir . . . . .	N & S. F.'ks S. Platte .	Comp's Pipe Line	Dec. 28, 1889	Oct. 1, 1889	1,336,989,400	. . . . The Citizen's Water Co.
The Lake Antero Reservoir. . .	South Platte river . .	On the stream . .	Mar. 20, 1890	Sept. 19, 1889	2,214,323,684	{ The Antero Reservoir and Land Company.
The Baker Reservoir . . . . .	{ Deadman's, Beaver & Guernsey Gulch's }	Inlet Ditch . . . .	July 24, 1890	July 15, 1889	58,050,000	. . . . . David Baker et al.
The Lidderdale Reservoir. . . .	South Platte river . .	On the stream . .	Oct. 14, 1890	July 15, 1890	32,000,000	. . . . . George W. Frost

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 23 (SOUTH PARK), GIVING THE DATE AND ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT OF THE FOURTH JUDICIAL DISTRICT. FROM THE CERTIFIED COPY OF THE DECREE, AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH, CANAL OR RESERVOIR.	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet per second appropriated and previously in district	Order of priority in district
The Beery Ditch.	Four Mile creek . . . . .	June 15, 1861	39.49 { Entire flow	. . . . .	. . . . .	. . . . .	1
The Trout Creek Ditch . . . . .	Trout creek . . . . .	July 1, 1862	. . . . .	. . . . .	. . . . .	39.49	2
The Borden Ditch . . . . .	{ Tarryall creek through } Mill ditch . . . . .	May 1, 1866	10	10	. . . . .	39.49	3
The Crosier Ditch. . . . .	House creek . . . . .	May 1, 1866	{ Entire flow	. . . . .	. . . . .	49.49	4
The Mill Ditch . . . . .	Tarryall creek . . . . .	Aug. 1, 1866	43.46	. . . . .	. . . . .	49.49	5
The Guiraud Ditch . . . . .	Middle Fork of S. Platte	July 1, 1867	48.97	. . . . .	7.65	92.95	6
The Cañon Ditch . . . . .	Middle Fork of S. Platte	July 15, 1867	57.59	. . . . .	15	141.92	7
The Small Ditch . . . . .	Middle Fork of S. Platte	May 1, 1868	1.32	. . . . .	. . . . .	199.51	8
The Four Mile Ditch . . . . .	Four Mile creek . . . . .	June 1, 1868	15	15	. . . . .	200.83	9
The Prince Ditch . . . . .	Middle Fork of S. Platte	Aug. 1, 1868	10	10	O. K.	215.83	10
The Wilkin Ditch. . . . .	Tarryall creek . . . . .	May 15, 1871	10	. . . . .	. . . . .	225.83	11

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet per second previously appropriated in district	Order of priority in district
The Ratcliff Ditch No. 1 . . . . .	Ratcliff's gulch . . . . .	May 1, 1872	.60	. . . . .	. . . . .	235.83	12
The Hopson Ditch . . . . .	Unnamed creek . . . . .	May 15, 1872	5.40	5.40	. . . . .	236.43	13
The Rock Creek Ditch . . . . .	Rock creek . . . . .	June 15, 1872	2.70	2.70	. . . . .	241.83	14
The Stevens Ditch No. 1 . . . . .	Little Trout creek . . . . .	July 1, 1872	2	. . . . .	. . . . .	244.53	15
The Stevens Ditch No. 2 . . . . .	Little Trout creek . . . . .	Sept. 1, 1872	2	. . . . .	. . . . .	246.53	16
The Ratcliff Ditch No. 2 . . . . .	Rock creek . . . . .	May 20, 1873	4.21	. . . . .	. . . . .	248.53	17
The Miller & Chapman Ditch . . . . .	Middle Fork of S. Platte . . . . .	May 23, 1873	10	10	. . . . .	252.74	18
The Sigafus Ditch . . . . .	Middle Fork of S. Platte . . . . .	May 25, 1873	25	25	17.14	262.74	19
The Haver Ditch No. 1 . . . . .	South Fork of S. Platte . . . . .	June 25, 1873	24.32	. . . . .	. . . . .	287.74	20
The Anderson Ditch No. 3 . . . . .	Middle Fork of S. Platte . . . . .	July 1, 1873	13.40	. . . . .	. . . . .	312.06	21
The Alden & Milligan Ditch . . . . .	Four Mile creek . . . . .	Aug. , 1873	15	. . . . .	. . . . .	325.46	22
The Chapelle Ditch . . . . .	South Fork of S. Platte . . . . .	Sept. 1, 1873	6	. . . . .	O. K.	340.46	23
The Kester Sweet Ditch . . . . .	South Fork of S. Platte . . . . .	June 1, 1874	25.39	. . . . .	O. K.	346.46	24
The Daniel Fyffe Ditch . . . . .	Four Mile creek . . . . .	June 1, 1874	6	. . . . .	. . . . .	371.85	25
The Stevens Ditch No. 3 . . . . .	Little Trout creek . . . . .	June 1, 1874	2	. . . . .	. . . . .	377.85	26

The Rock Creek Ditch, first enlargement . . . . .	Rock creek . . . . .	June 1, 1874	2.30	5	. . . . .	379.85	27
The Reinhardt Ditch No. 1 . . . . .	Four Mile creek . . . . .	June 11, 1874	36	. . . . .	. . . . .	382.15	28
The Brownlow & Stephens Ditch . . . . .	Four Mile creek . . . . .	June 10, 1874	21.44	. . . . .	. . . . .	418.15	29
The Pruden Ditch . . . . .	Pruden creek . . . . .	June 15, 1874	13.50	. . . . .	. . . . .	439.59	30
The Troppe Ditch . . . . .	Tarryall creek . . . . .	July 1, 1874	1.05	. . . . .	. . . . .	453.09	31
The Stevens Ditch No. 4 . . . . .	Little Trout creek . . . . .	July 1, 1874	2	. . . . .	. . . . .	454.14	32
The Burns & Sessions Ditch . . . . .	Jefferson-creek . . . . .	Oct. 1, 1874	27	. . . . .	. . . . .	456.14	33
The Randall & Nicholas Ditch . . . . .	Michigan creek . . . . .	Oct. 14, 1874	48	. . . . .	. . . . .	483.14	34
The Borden Ditch No. 2 . . . . .	Tarryall creek . . . . .	Nov. 1, 1874	9.46	. . . . .	. . . . .	531.14	35
The Mary G. Borden Ditch . . . . .	Tarryall creek . . . . .	Nov. , 1874	6	. . . . .	. . . . .	540.60	36
The Demick Ditch . . . . .	Michigan creek . . . . .	April 12, 1875	14	14	. . . . .	546.60	37
The Fehringer Ditch No. 1 . . . . .	Middle Fork of S. Platte	April 20, 1875	17.90	. . . . .	. . . . .	560.60	38
The Crozier & Hauxhurst Ditch . . . . .	Jefferson creek . . . . .	April 25, 1875	21.24	. . . . .	. . . . .	578.50	39
The Wadley Ditch No. 1 . . . . .	Trout creek . . . . .	May 1, 1875	4.78	. . . . .	. . . . .	599.74	40
The Wadley Ditch No. 2 . . . . .	Trout creek . . . . .	May 1, 1875	11.66	. . . . .	. . . . .	604.52	41
The Weed Ditch . . . . .	Middle Fork of S. Platte	May 1, 1875	20	. . . . .	. . . . .	616.18	42
The Sigafus Ditch, first enlargement . . . . .	Middle Fork of S. Platte	May 1, 1875	25	50	17.14	636.18	43
The Ratcliff Ditch No. 3 . . . . .	Rock creek . . . . .	May 1, 1875	4.06	. . . . .	. . . . .	661.18	44
The Packer & Bonis Ditch . . . . .	Tarryall creek . . . . .	May 15, 1875	1.60	1.60	. . . . .	655.24	45
The Brubaker Ditch . . . . .	Jefferson creek . . . . .	May 15, 1875	17.51	. . . . .	. . . . .	666.84	46
The Parmelee & Shoemaker Ditch No. 1 . . . . .	South Fork . . . . .	May 20, 1875	30.54	30.54	O. K.	684.35	47
The Anderson Ditch No. 2 . . . . .	Middle Fork . . . . .	May 25, 1875	10.45	. . . . .	. . . . .	714.89	48

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet per second previously appropriated in district	Order of priority in district
The Sadler Ditch . . . . .	Middle Fork of So. Platte	May, 1875	49	. . . . .	. . . . .	725.34	49
The Wadley Ditch No. 3 . . . . .	Trout creek . . . . .	June 1, 1875	3.25	. . . . .	. . . . .	774.34	50
The Baker and Lilley Ditch . . . . .	Deadman's gulch . . . . .	June 1, 1875	14.60	. . . . .	. . . . .	777.59	51
The Tarryall Ditch . . . . .	Tarryall creek . . . . .	June 15, 1875	7.90	. . . . .	. . . . .	792.19	52
The Michigan Ditch . . . . .	Michigan creek . . . . .	June 30, 1875	3.16	. . . . .	. . . . .	800.09	53
The Holthusen Ditch . . . . .	No Name creek . . . . .	July 1, 1875	1.31	. . . . .	. . . . .	803.25	54
The Dunbar Ditch . . . . .	Tarryall creek . . . . .	April 5, 1876	27	. . . . .	. . . . .	804.56	55
The Hauxthurst Ditch . . . . .	Jefferson creek . . . . .	April 25, 1876	12	. . . . .	. . . . .	831.56	56
The McManus Ditch . . . . .	Tarryall creek . . . . .	May 1, 1876	20	. . . . .	. . . . .	843.56	57
The Prince Ditch, first enlargement . . . . .	Middle Fork of So. Platte	May 10, 1876	45.60	55.60	. . . . .	863.56	58
The Holst Ditch No. 1 . . . . .	Tarryall creek . . . . .	May 15, 1876	8.78	. . . . .	. . . . .	909.16	59
The Hubbard Ditch . . . . .	South Fork of So. Platte	May 22, 1876	19	. . . . .	. . . . .	917.94	60
The Lee Ditch No. 1 . . . . .	Rock creek . . . . .	June 1, 1876	1.08	. . . . .	. . . . .	936.94	61
The Parmelee and Shoemaker Ditch No. 3 . . . . .	South Fork of So. Platte	June 15, 1876	39.48	. . . . .	4.67	938.02	62
The Island Ditch . . . . .	South Fork of So. Platte	June 30, 1876	12.67	. . . . .	. . . . .	968.50	63



The Haver Ditch No. 2 . . . . .	July 1, 1876	29.98	. . . . .	15	981.17	64
The Balm of Gilead Ditch . . . . .	July 15, 1876	13.50	. . . . .	. . . . .	1,011.15	65
The Foster Ditch . . . . .	July, 1876	42	. . . . .	. . . . .	1,024.65	66
The Reinhardt Ditch No. 4 . . . . .	Aug. 1, 1876	6.90	. . . . .	. . . . .	1,066.65	67
The Crozier and Taylor Ditch . . . . .	Oct. 1, 1876	31.74	. . . . .	. . . . .	1,073.55	68
The Sigafus Ditch, second enlargement . . . . .	May 10, 1876	10	60	. . . . .	1,105.29	69
The Holst and Packer Ditch . . . . .	Dec. 15, 1876	11.70	. . . . .	. . . . .	1,115.29	70
The Milligan Ditch . . . . .	May 1, 1877	17.55	. . . . .	. . . . .	1,126.99	71
The Lee Ditch No. 2 . . . . .	May 1, 1877	.50	. . . . .	. . . . .	1,144.54	72
The Packer and Bonis Ditch, first enlargement . . . . .	May 14, 1877	4.60	6.20	. . . . .	1,145.04	73
The Lavaack Ditch . . . . .	May 15, 1877	8	. . . . .	. . . . .	1,149.64	74
The Hot Springs Ditch . . . . .	May 15, 1877	28	. . . . .	13.06	1,157.64	75
The Parmelee and Shoemaker Ditch No. 2 . . . . .	June 1, 1877	44.30	. . . . .	25	1,185.64	76
The Central Ditch . . . . .	June 1, 1877	33	. . . . .	. . . . .	1,229.94	77
The Franks Ditch . . . . .	June 15, 1877	37.59	. . . . .	O. K.	1,262.94	78
The Rock Creek Ditch No. 1 . . . . .	June 30, 1877	1.35	. . . . .	. . . . .	1,300.53	79
The Lavaack Ditch No. 2 . . . . .	July 1, 1877	3	. . . . .	. . . . .	1,301.88	80
The Fritz Ditch . . . . .	July 1, 1877	24	. . . . .	5.54	1,304.88	81
The Crooked Creek Ditch . . . . .	1877	{ Entire flow.	{ . . . . .	. . . . .	. . . . .	82
The Ohler Gulch Ditch . . . . .	April 1, 1878	{ Entire flow.	{ . . . . .	. . . . .	. . . . .	83
The Fehringer Ditch No. 2 . . . . .	April 20, 1878	13.40	. . . . .	. . . . .	1,328.88	84
The Donovan Ditch . . . . .	May 15, 1878	45	. . . . .	. . . . .	1,342.28	85



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet per second previously appropriated in district	Order of priority in district
The Harland Ditch.	Tarryall creek . . . . .	May 20, 1878	27	.	.	1,387.28	86
The Lavack Ditch, first enlargement.	{ Waste water from the Cincinnati ditch	May 28, 1878	2	10	.	1,414.28	87
The Baker Ditch . . . . .	Guernsey gulch . . . . .	June 15, 1878	{ Entire flow	.	.	.	88
The Miller and Chapman Ditch, first enlargement . . . . .	Middle fork South Platte	June 20, 1878	2	12	.	1,416.28	89
The Taylor Ditch. . . . .	Michigan creek . . . . .	July 18, 1878	13.50	.	.	1,418.28	90
The Randall Ditch . . . . .	Michigan creek . . . . .	Aug. 1, 1878	27	27	.	1,431.78	91
The Binkley Ditch No. 2 . . . . .	Twelve Mile creek . . . . .	Aug. 1, 1878	20	.	12	1,438.78	92
The Burlingame Ditch . . . . .	South fork South Platte.	Aug. 10, 1878	27	.	23.55	1,478.78	93
The Nelson Ditch . . . . .	Pennsylvania creek . . . . .	April 1, 1879	27	.	4	1,505.78	94
The Main or Hotel Ditch. . . . .	South fork South Platte.	April 5, 1879	29	.	13	1,532.78	95
The Thompson and Radcliff Ditch . . . . .	South fork South Platte.	April 12, 1879	27	.	7.30	1,561.78	96
The Holst Ditch No. 2 . . . . .	Tarryall creek . . . . .	April 30, 1879	11.70	.	.	1,588.78	97
The O'Neil Ditch . . . . .	Tarryall creek . . . . .	May 10, 1879	28.83	.	.	1,600.48	98
The Rogers North Ditch . . . . .	Middle fork South Platte	May 15, 1879	84	.	17.36	1,629.31	99
The Anchor Ditch . . . . .	Jefferson creek . . . . .	May 20, 1879	21.40	.	.	1,713.31	100

The Elisha Alden Ditch . . . . .	Middle fork South Platte	May 21, 1879	57.09	. . . . .	30.25	1,734.71	101
The Weed Ditch . . . . .	Middle fork South Platte	June 1, 1879	13.50	. . . . .	. . . . .	1,791.80	102
The Cincinnati Ditch. . . . .	Michigan creek . . . . .	June 20, 1879	13.50	. . . . .	. . . . .	1,805.30	103
The Spring Branch Ditch . . . . .	A spring . . . . .	July 1, 1879	{ Entire flow }	. . . . .	. . . . .	. . . . .	104
The Rayner and Edmondson Ditch No. 2 . . . . .	Middle fork South Platte	July 15, 1879	25	. . . . .	7	1,818.80	105
The Henry Ditch. . . . .	Mountain creek . . . . .	July 25, 1879	1	. . . . .	. . . . .	1,843.80	106
The Binkley Ditch . . . . .	{ East branch Twelve }	Sept. 1, 1879	25	. . . . .	4.46	1,844.80	107
The W. K. Head Ditch . . . . .	Jefferson creek. . . . .	Sept. 1, 1879	27	. . . . .	. . . . .	1,869.80	108
The Borden Ditch, first enlargement. . . . .	{ Tarryall creek through Mill ditch }	1879	5	15	. . . . .	1,896.80	109
The Whitten Ditch . . . . .	Michigan creek . . . . .	Mar. 15, 1880	15	. . . . .	. . . . .	1,901.80	110
The Peabody Ditch. . . . .	Tarryall creek . . . . .	April 20, 1880	3	. . . . .	. . . . .	1,916.80	112
The Weaver Ditch No. 1. . . . .	South fork South Platte .	May 1, 1880	1.35	. . . . .	. . . . .	1,919.80	113
The Rogers Ditch. . . . .	South fork South Platte .	May 10, 1880	42.74	. . . . .	. . . . .	1,921.15	114
The Platte Station Ditch . . . . .	South fork South Platte .	May 10, 1880	9	9	7.72	1,963.89	115
The Slater Ditch . . . . .	Tarryall creek . . . . .	May 20, 1880	27	. . . . .	. . . . .	1,972.89	116
The Dunbar Ditch No. 3. . . . .	Tarryall creek . . . . .	May 30, 1880	4	. . . . .	. . . . .	1,999.89	117
The Petrie Ditch. . . . .	Tarryall creek . . . . .	June 1, 1880	27	. . . . .	. . . . .	2,003.89	118
The Ratcliff Ditch No. 4 . . . . .	Rock creek. . . . .	June 1, 1880	3.16	. . . . .	. . . . .	2,030.89	119
The Holthausen Ditch No. 1 . . . . .	{ Waste water of the Hopson ditch }	June 1, 1880	1.35	. . . . .	. . . . .	2,034.05	120
The Parmelee and Shoemaker Ditch No. 1, first enlargement	South fork South Platte .	June 1, 1880	9.30	39.84	. . . . .	2,035.40	121
The Ratcliff Ditch No. 5 . . . . .	Rock creek. . . . .	June 9, 1880	3.16	. . . . .	. . . . .	2,044.70	122
The Packer Ditch . . . . .	Tarryall creek . . . . .	June 20, 1880	12	. . . . .	. . . . .	2,047.86	123

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet previously appropriated in district	Order of priority in district
The Pierce Ditch . . . . .	South Fork of So. Platte	June, 1880	55	. . . .	20.18	2,059.86	124
The Heeley Ditch No. 1 . . . . .	W. br. of Twelve Mile ck	July 1, 1880	11	. . . .	9.20	2,114.86	125
The Heeley Ditch No. 2 . . . . .	E. br. of Twelve Mile ck	July 1, 1880	5.50	. . . .	3.45	2,125.86	126
The Sessions Ditch . . . . .	Michigan creek . . . . .	July 31, 1880	13.50	. . . .	. . . .	2,131.36	127
The Souders and Wolfe Ditch No. 2 . . . . .	South Fork of So. Platte	Aug. 1, 1880	1.86	. . . .	. . . .	2,144.86	128
The Dunbar Ditch No. 2 . . . . .	Tarryall creek . . . . .	Aug. 1, 1880	4.05	. . . .	. . . .	2,146.72	129
The Gibson Ditch . . . . .	Michigan creek . . . . .	Sept. 15, 1880	1.60	. . . .	. . . .	2,150.77	130
The Skelton Ditch . . . . .	Michigan creek . . . . .	Nov. 1, 1880	10	. . . .	. . . .	2,152.37	131
The Demick Ditch, first enlargement . . . . .	Michigan creek . . . . .	April 1, 1881	10	24	. . . .	2,162.37	132
The Randall Ditch, first enlargement . . . . .	Michigan creek . . . . .	April 1, 1881	27	54	. . . .	2,172.37	133
The Thompson Ditch . . . . .	Middle Fork of So. Platte	April 2, 1881	31	. . . .	O. K.	2,199.37	134
The Anderson Ditch . . . . .	Middle Fork of So. Platte	April 20, 1881	54.05	. . . .	. . . .	2,230.37	135
The Reinhardt Ditch No. 2 . . . . .	High creek . . . . .	May 1, 1881	8.92	. . . .	. . . .	2,284.42	136
The Reinhardt Ditch No. 3 . . . . .	High creek . . . . .	May 1, 1881	8.92	. . . .	. . . .	2,293.34	137
The Harris ditch . . . . .	Four Mile creek . . . . .	May 1, 1881	16.45	. . . .	. . . .	2,302.26	138

The Love & Rayner Ditch . . . . .	Middle Fork of So. Platte	May	8, 1881	8.16	2,318.71	139
The Peabody Ditch No. 2 . . . . .	Tarryall creek . . . . .	May	10, 1881	4	2,326.81	140
The D. F. Miller Ditch No. 1 . . . . .	Middle Fork of So. Platte	May	10, 1881	126.20	2,330.81	141
The W. R. Head Ditch No. 3 . . . . .	Jefferson creek . . . . .	May	10, 1881	2.63	2,457.01	142
The W. R. Head Ditch No. 4 . . . . .	Jefferson creek . . . . .	May	15, 1881	2.63	2,459.64	143
The Platte Station Ditch, first enlargement . . . . .	South Fork of So. Platte	May	15, 1881	2.45	2,462.27	144
The Anderson & Brewer Ditch . . . . .	Tarryall creek . . . . .	June	1, 1881	23.35	2,464.72	145
The Dunbar Ditch No. 1 . . . . .	Tarryall creek . . . . .	Aug.	15, 1881	27	2,488.07	146
The Lilley & Harriman Ditch . . . . .	Jefferson creek . . . . .	Sept.	17, 1881	12	2,515.07	147
The Western Ditch . . . . .	Middle Fork of So. Platte	Oct.	1, 1881	66	2,527.07	148
The Drake Ditch . . . . .	South Fork of So. Platte	Oct.	10, 1881	6.27	2,593.07	149
The Demick Ditch, second enlargement . . . . .	Michigan creek . . . . .	Mar.	1, 1882	10	2,599.34	150
The Thoborg Ditch . . . . .	E. br. of Twelve Mile ck	Mar.	20, 1882	15.50	2,609.34	151
The Radford and Wright Ditch . . . . .	Twelve Mile creek . . . . .	Mar.	21, 1882	15	2,624.84	152
The Garden Ditch . . . . .	Twelve Mile creek . . . . .	Mar.	23, 1882	11	2,639.84	153
The Lassell Ditch . . . . .	Michigan creek . . . . .	May	1, 1882	12	2,650.84	154
The Ratcliff Ditch No. 6 . . . . .	Rock creek . . . . .	May	1, 1882	2.05	2,662.84	155
The Ratcliff Ditch No. 7 . . . . .	Rock creek . . . . .	May	1, 1882	2.05	2,664.89	156
The Little Channel Ditch . . . . .	Middle Fork of So. Platte	May	1, 1882	8.10	2,666.94	157
The Craig Ditch . . . . .	Jefferson creek . . . . .	May	5, 1882	8.65	2,675.04	158
The Bonnell Ditch . . . . .	Middle Fork of So. Platte	May	8, 1882	27	2,683.69	159
The Rogers South Ditch . . . . .	Middle Fork of So. Platte	May	15, 1882	84	2,710.69	160

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet per second appropriated in and previously in district	Order of priority in district
The Weston Ditch . . . . .	Beaver creek . . . . .	May 16, 1882	31.45	. . . . .	. . . . .	2,794.69	161
The Ratcliff Ditch No. 8 . . . . .	Rock creek . . . . .	May 21, 1882	4.32	. . . . .	. . . . .	2,826.14	162
The Ratcliff Ditch No. 9 . . . . .	Rock creek . . . . .	May 21, 1882	4.10	. . . . .	. . . . .	2,830.46	163
The Divine Hill Ditch . . . . .	Middle Fork of S. Platte	May, 1882	49	. . . . .	. . . . .	2,834.56	164
The East Side Ditch . . . . .	W. branch of 12-Mile cr.	June 1, 1882	18.70	. . . . .	. . . . .	2,883.56	165
The Park Ditch . . . . .	Middle Fork of S. Platte	June 10, 1882	60	. . . . .	. . . . .	2,902.26	166
The Rayner & Edmondson Ditch No. 1 . . . . .	Middle Fork of S. Platte	June 10, 1882	20	. . . . .	. . . . .	2,962.26	167
The Mikles Ditch . . . . .	Willow creek . . . . .	June 10, 1882	20.55	. . . . .	. . . . .	2,982.26	168
The Rayner & Edmondson Ditch No. 5 . . . . .	Middle Fork of S. Platte	June 14, 1882	20	. . . . .	. . . . .	3,002.81	169
The Rayner & Edmondson Ditch No. 3 . . . . .	Middle Fork of S. Platte	June 15, 1882	5.85	. . . . .	. . . . .	3,022.81	170
The Litner Ditch . . . . .	Jefferson creek . . . . .	June 15, 1882	2	. . . . .	. . . . .	3,028.66	171
The Redmon Ditch . . . . .	South Fork of S. Platte . .	June 20, 1882	13.40	. . . . .	10	3,030.66	172
The Rayner & Edmondson Ditch No. 4 . . . . .	Middle Fork of S. Platte	June 28, 1882	2	. . . . .	. . . . .	3,044.06	173
The D. F. Miller Ditch . . . . .	Middle Fork of S. Platte	July 5, 1882	15.76	. . . . .	. . . . .	3,046.06	174
The Gibson Ditch, first enlargement . . . . .	Michigan creek . . . . .	July 25, 1882	1.10	2.70	. . . . .	3,061.82	175



The Four Mile Ditch. . . . .	Four-Mile creek . . . . .	Aug. 20, 1882	5.40	. . . . .	. . . . .	3,062.92	176
The Harrington South Ditch. . . . .	Middle Fork of S. Platte	Sept. 15, 1882	43	. . . . .	. . . . .	3,068.32	177
The Rickards Lower Ditch. . . . .	Middle Fork of S. Platte	Sept. 15, 1882	45	. . . . .	5.38	3,111.32	178
The Sheep Rock Ditch. . . . .	Jefferson creek. . . . .	Nov. 1, 1882	11.70	. . . . .	. . . . .	3,156.32	179
The St. Charles Ditch . . . . .	Michigan creek. . . . .	April 25, 1883	6	. . . . .	. . . . .	3,168.02	180
The Dudley Ditch . . . . .	Four-Mile creek . . . . .	May 10, 1883	16.21	. . . . .	. . . . .	3,174.02	181
The O'Brien Ditch . . . . .	Middle Fork of S. Platte	May 20, 1883	6.50	. . . . .	. . . . .	3,190.23	182
The Shaffinger Ditch. . . . .	Michigan creek . . . . .	June 1, 1883	2.16	. . . . .	. . . . .	3,196.73	183
The Weaver Ditch No. 2 . . . . .	South Fork of S. Platte .	July 1, 1883	1	. . . . .	. . . . .	3,198.89	184
The W. H. Miller Ditch . . . . .	Michigan creek . . . . .	Oct. 15, 1883	2	. . . . .	. . . . .	3,199.89	185
The Limer Ditch, first enlargement. . . . .	Jefferson creek. . . . .	Nov. 13, 1883	4	6	. . . . .	3,201.89	186
The Beaver Creek Ditch . . . . .	Beaver creek. . . . .	Dec. 28, 1883	16	. . . . .	. . . . .	3,205.89	187
The Rebecca Ditch . . . . .	Michigan creek . . . . .	May 1, 1884	5	. . . . .	. . . . .	3,221.89	188
The Park Gulch Ditch . . . . .	Park gulch. . . . .	May 8, 1884	6.08	. . . . .	. . . . .	3,226.89	189
The Four-Mile Ditch, first enlargement . . . . .	Four-Mile creek . . . . .	May 11, 1884	3.75	18.75	7.35	3,232.97	190
The Harlan Extension Ditch. . . . .	{ Waste water from the Harlan ditch . . . . . }	May 15, 1884	4.32	. . . . .	. . . . .	3,236.72	191
The Lee Ditch No. 3 . . . . .	Rock creek. . . . .	May 15, 1884	.37	. . . . .	. . . . .	3,241.04	192
The Mexican Ditch . . . . .	South Fork of S. Platte .	May 17, 1884	13	. . . . .	. . . . .	3,241.41	193
The Lee Ditch No. 4 . . . . .	Rock creek. . . . .	May 21, 1884	.37	. . . . .	. . . . .	3,251.41	194
The Chubb Ditch. . . . .	Green's lake . . . . .	June 1, 1884	91.52	. . . . .	. . . . .	3,254.78	195
The Kenosha Ditch . . . . .	Kenosha creek. . . . .	July 8, 1884	8	. . . . .	. . . . .	3,346.30	196
The Harrington & Rickards Ditch. . . . .	Middle Fork of S. Platte	Oct. 15, 1884	94	. . . . .	24.55	3,354.30	197



## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Actual maximum capacity, as determined by actual gaugings	Cubic feet per second and previously appropriated in district	Order of priority in district
The Nelson High Creek Ditch . . . . .	High creek . . . . .	Mar. 15, 1885	10	. . . . .	. . . . .	3,448.30	198
The McCartney Ditch . . . . .	Tarryall creek . . . . .	May 20, 1885	75	. . . . .	. . . . .	3,458.730	199
The Link Ditch . . . . .	Tarryall creek . . . . .	May 20, 1885	19	. . . . .	. . . . .	3,538.30	200
The Island Ditch . . . . .	Middle Fork of S. Platte . . . . .	May 20, 1885	8.11	. . . . .	. . . . .	3,552.30	201
The Hartsel Four Mile Ditch . . . . .	Four-Mile creek . . . . .	June 8, 1885	22	. . . . .	. . . . .	3,560.41	202
The W. R. Head Ditch No. 2 . . . . .	Jefferson creek . . . . .	June 10, 1885	.37	. . . . .	. . . . .	3,582.41	203
The Montag and Truax Ditch . . . . .	Tarryall creek . . . . .	June 15, 1885	25	. . . . .	. . . . .	3,582.78	204
The Alkaline Ditch . . . . .	Middle Fork of S. Platte . . . . .	July 1, 1885	27	. . . . .	. . . . .	3,607.78	205
The Peabody Ditch No. 3 . . . . .	Tarryall creek . . . . .	May 15, 1886	10	. . . . .	. . . . .	3,634.78	206
The Souders and Wolf Ditch No. 4 . . . . .	South Fork of S. Platte . . . . .	June 12, 1886	3.21	. . . . .	. . . . .	3,644.78	207
The Sacramento Ditch . . . . .	Sacramento creek . . . . .	July 27, 1886	60	. . . . .	4.50	3,647.99	208
The Como Jim Ditch . . . . .	Middle Fork of S. Platte . . . . .	Oct. 1, 1886	84	. . . . .	. . . . .	3,707.99	209
The Haver Ditch No. 3 . . . . .	South Fork of S. Platte . . . . .	May 1, 1887	20.47	. . . . .	12.20	3,791.99	210
The Peart Lower Ditch . . . . .	Four-Mile creek . . . . .	May 15, 1887	35	. . . . .	5.64	3,812.46	211
The "Ditch" Ditch . . . . .	Middle Fork of S. Platte . . . . .	May 24, 1887	50	. . . . .	. . . . .	3,847.46	212

	May 25, 1887	11.68	O. K.	213
The Souders and Wolfe Ditch No. 6 . . . . .	South Fork of S. Platte . . . . .			3,897.46
The Souders and Wolfe Ditch No. 3 . . . . .	South Fork of S. Platte . . . . .	2.17		3,909.14
The Souders and Wolfe Ditch No. 5 . . . . .	South Fork of S. Platte . . . . .	2.55		3,911.31
The Trevan Upper Ditch . . . . .	Sacramento creek . . . . .	30	.70	3,913.86
The John Radford Ditch . . . . .	Twelve-Mile creek . . . . .	12		3,943.86
The Bonnell Ditch, first enlargement . . . . .	Middle Fork of S. Platte . . . . .	6.75	33.75	3,955.86
The Trevan Lower Ditch . . . . .	Sacramento creek . . . . .	30		3,962.61
The Weaver Ditch No. 3 . . . . .	South Fork of S. Platte . . . . .	1.35		3,992.61
The W. H. Miller Ditch No. 2 . . . . .	Michigan creek . . . . .	1.35		3,993.96
The Burlingame Ditch No. 2 . . . . .	South Fork of S. Platte . . . . .	1.62		3,995.31
The Burlingame Ditch No. 3 . . . . .	South Fork of S. Platte . . . . .	1.62		3,996.93
The Peart Upper Ditch . . . . .	Four-Mile creek . . . . .	30	.5	3,998.55
The Hopson Ditch, first enlargement . . . . .	Unnamed stream . . . . .	.60	6	4,028.55
The Hubbard Ditch No. 2 . . . . .	South Fork of S. Platte . . . . .	30		4,029.15
The Jefferson Lake Ditch . . . . .	Jefferson lake . . . . .	546		4,059.15
The Ohler Ditch . . . . .	Jefferson creek . . . . .	30		4,605.15
Total in district . . . . .				4,635.15

*Water District No. 46*—C. F. Staples, Commissioner, Hebron, Larimer county.

Water District No. 46 consists of all lands irrigated by water taken from that portion of the North Platte river, above the mouth of Michigan creek, and from the streams draining into the said portion of the North Platte river.

The water-rights of this district not having been adjudicated, the Commissioner did not attempt a distribution of the water, and, therefore, has no report to make.

# STATEMENT CONCERNING DITCHES

IN DISTRICT No. 46, RELATIVE TO WHICH STATEMENTS HAD BEEN FILED IN THE STATE ENGINEER'S OFFICE, UNDER THE HEAD OF "MISCELLANEOUS" (NORTH PARK, ETC.), PRIOR TO APRIL 17, 1889, THE DATE OF THE FORMATION OF THIS DISTRICT DISTRICT, AND NOW TRANSFERRED TO THE PROPER DISTRICT.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Eureka Ditch . . . . .	Arapahoe Creek . . . . .	Nov. 15, 1887	Sept. 8, 1887	55	William G. Mellen and Charles Bock
The Arapahoe Ditch . . . . .	Arapahoe Creek . . . . .	Jan. 27, 1888	Jan. 25, 1888	12	R. B. and W. W. Spaulding
The Park Ditch . . . . .	Lake Creek . . . . .	Jan. 20, 1888	June 6, 1888	11	Montie Blivins
The Montie Ditch . . . . .	Lake Creek . . . . .	June 20, 1888	Sept. 16, 1885	11	Montie Blivins
The Wolfier Ditch . . . . .	Roaring Fork . . . . .	July 24, 1888	April 11, 1888	9	A. Wolfier
The 969 Ditch . . . . .	Big Grizzly River . . . . .	Sept. 4, 1888	June 1, 1885	3	James Murphy
The Nairn Ditch . . . . .	Little Grizzly River . . . . .	Oct. 1, 1888	June 15, 1885	28	John Riach, <i>et al</i>
The Edith Ditch . . . . .	Cheyenne Creek . . . . .	Oct. 4, 1888	May 1, 1886	10	Frank E. Hodgson and Geo. A. Hodgson
The Dora Ditch . . . . .	Cheyenne Creek . . . . .	Oct. 30, 1888	May 1, 1887	Not given	James Leade, Geo. A. Hodgson
The Rocky Ditch . . . . .	Arapahoe Creek . . . . .	Oct. 30, 1888	May 1, 1888	40	W. J. Trounscell, Robert M. Davids
The Timber Ditch . . . . .	Hill Creek . . . . .	Oct. 30, 1888	Oct. 1, 1884	Not given	John Edwards
The Burke Ditch . . . . .	Buffalo Creek . . . . .	Nov. 20, 1888	Aug. 1, 1888	23	Robt. Burke, R. G. Floyd, D. M. Hanson
The Wisconsin Ditch . . . . .	Buffalo Creek . . . . .	Nov. 20, 1888	May 15, 1887	40.50	R. G. Floyd, D. M. Hanson
The Marr Ditch No. 1 . . . . .	Big Grizzly River . . . . .	Nov. 22, 1888	Spring, 1877	Not given	William Marr

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office.	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Marr Ditch No. 2 . . . . .	Little Grizzly River . . . . .	Nov. 22, 1888	Spring, 1883	Not given	William Marr
The Castle Ditch . . . . .	Big Grizzly River . . . . .	Nov. 22, 1888	April 15, 1885	About 41	Geo. W. Bailey, Dennis O'Brien
The Mallon Ditch . . . . .	Roaring Fork . . . . .	Nov. 26, 1888	April 20, 1888	Not given	Barney Mallon
The Spicer Ditch . . . . .	Big Grizzly River . . . . .	Dec. 1, 1888	May 13, 1883	28	Montie Blivins
The Moore Ditch No. 4 . . . . .	Platte River . . . . .	Dec. 14, 1888	Not stated	7.81	Dan'l L. Moore
The Independence Ditch . . . . .	Lake Creek . . . . .	Dec. 31, 1888	July, 1833	208.33	N. H. Mcldrum, W. F. Scribner
The Polled Angus . . . . .	Buffalo Creek . . . . .	Jan. 4, 1889	May 16, 1887	20	R. G. Floyd, D. M. Hanson
The Newcomb Ditch . . . . .	Little Grizzly River . . . . .	Jan. 22, 1889	August, 1884	Not given	Geo. Newcomb
The Little Grizzly Ditch . . . . .	Little Grizzly River . . . . .	Feb. 2, 1889	Not stated	9	William McConaughy
The Darling Ditch . . . . .	Little Grizzly River . . . . .	Feb. 7, 1889	May 1, 1887	Not given	A. W. Darling
The Independent Ditch . . . . .	North Fork River . . . . .	April 11, 1889	June 6, 1888	63	Charles A. Brands, et al

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 46, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE,  
FROM APRIL 17, 1889, THE DATE OF THE FORMATION OF THIS DISTRICT, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Staples Ditch No. 1 . . . . .	Little Grizzly river.	April 22, 1889	May 15, 1887	Not given	. . . . . C. F. Staples
The Slack Ditch . . . . .	Buffalo creek. . . . .	April 25, 1889	Nov. 13, 1887	20	. . . . . Daniel A. McIsaac <i>et al.</i>
The Butler Ditch . . . . .	Beaver creek. . . . .	April 27, 1889	May 23, 1888	8	. . . . . Hiram P. Butler
The Bennett and Leshuer Ditch . . . . .	Little Grizzly river.	May 2, 1889	April 1, 1889	12	. . . . . William Bennett and Leshuer
The New Ross Ditch. . . . .	Buffalo creek. . . . .	May 25, 1889	Mar. 23, 1889	8	. . . . . James Taylor
The Seymour Ditch No. 1 . . . . .	Big Grizzly river. . . . .	June 4, 1889	Not stated	5.02	. . . . . Henry Seymour
The Seymour Ditch No. 2 . . . . .	Big Grizzly river. . . . .	June 4, 1889	Not stated	5.02	. . . . . Henry Seymour
The Lone Pine Ditch No. 1 . . . . .	Lone Pine creek . . . . .	June 4, 1889	May 1, 1889	5	. . . . . Chas. W. Brown and Fred Knoth
The Mitchell Ditch . . . . .	Cheyenne creek . . . . .	June 4, 1889	May 1, 1888	35	. . . . . John Mitchell <i>et al.</i>
The Mabel Dow Ditch . . . . .	Lawrence creek . . . . .	June 15, 1889	June 4, 1889	11	. . . . . Jacob J. Tritt
The Log Cabin Ditch . . . . .	North Fork river. . . . .	June 15, 1889	May 2, 1889	8	. . . . . John F. McCasland
The Legal Tender Ditch. . . . .	North Fork river. . . . .	June 15, 1889	June 6, 1888	14	. . . . . Chas. Brauds
The Butler Ditch No. 2 . . . . .	North Cheyenne c'k	July 5, 1889	June 1, 1887	5	. . . . . H. P. Butler
The Hodgson Ditch . . . . .	Cheyenne creek . . . . .	July 2, 1889	April 10, 1889	8	. . . . . Geo. A. Hodgson



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL.	Stream from which water is diverted	Date of filing in State Engineer's office	Date of com- mencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Mellen Ditch . . . . .	Buffalo creek. . . . .	July 11, 1889	May 3, 1887	5	William G. Mellen
The Coburn Ditch. . . . .	No Name creek . . . . .	July 17, 1889	June 27, 1889	2	John Coburn
The Willow Ditch . . . . .	Arapahoe creek . . . . .	Aug. 1, 1889	May 1, 1887	20	Joseph Murphy
The West Fork Ditch . . . . .	North Fork river. . . . .	Aug. 26, 1889	May 29, 1884	43	William Norrell <i>et al</i>
The Victor Ditch. . . . .	North Fork river. . . . .	Aug. 26, 1889	Aug. 15, 1889	43	John W. Rigger <i>et al</i>
The New Ross Ditch. . . . .	Buffalo creek. . . . .	Sept. 16, 1889	Mar. 23, 1889	8	James Taylor
The Lorena Ditch . . . . .	North Platte river. . . . .	Sept. 23, 1889	April 25, 1886	14	George Mauville
The Ute Ditch . . . . .	Ute creek . . . . .	Sept. 23, 1889	Sept. 11, 1889	14	William Y. Harvison
The Clifton Ditch . . . . .	Buffalo creek. . . . .	Sept. 25, 1889	May 7, 1887	3	Addison C. Ridings
The Addison Ditch . . . . .	Buffalo creek. . . . .	Sept. 25, 1889	June 15, 1885	14	Addison C. Ridings
The Antelope Ditch . . . . .	S. Fork Little Grizzly	Sept. 28, 1889	May 15, 1886	14	Thomas J. Taylor and Theodore L. Cook
The Peterson Ditch No. 1 . . . . .	Big Grizzly river . . . . .	Sept. 30, 1889	June 1, 1882	21	Elias Peterson <i>et al</i>
The Peterson Ditch No. 2 . . . . .	Big Grizzly river . . . . .	Sept. 30, 1889	July, 1883	16	Elias Peterson <i>et al</i>
The Damfino Ditch . . . . .	Big Grizzly river . . . . .	Oct. 3, 1889	May 15, 1885	31	Lars Larson and R. M. Davids & Co.
The Koping Ditch . . . . .	Big Grizzly river . . . . .	Oct. 3, 1889	May 1, 1883	13	A. W. Westholm
The Chedsey Ditch No. 1 . . . . .	Skull creek. . . . .	Oct. 9, 1889	July 1883	14	H. C. Chedsey <i>et al</i>
The Larson Ditch . . . . .	Big Grizzly river . . . . .	Oct. 3, 1889	May 10, 1889	10	Lars Larson

The Chedsey Ditch No. 2 . . . . .	S. fork Little Grizzly	Oct.	9, 1889	June 1, 1889	20	H. C. Chedsey <i>et al</i>
The Chapman Ditch . . . . .	S. fork Little Grizzly	Oct.	9, 1889	May 1, 1886	Not given	H. C. Chedsey <i>et al</i>
The Butler Ditch No. 4 . . . . .	Cheyenne creek . .	Oct.	9, 1889	May 1887	14	H. P. Butler
The Butler Ditch No. 3 . . . . .	N. fork Cheyenne crk	Oct.	9, 1889	June 1, 1884	12	H. P. Butler
The Ernest Ditch or Canal . . . . .	Cheyenne creek . .	Oct.	9, 1889	May 15, 1889	14	E. N and H. P. Butler
The Jennie Ditch . . . . .	S. fork Little Grizzly	Oct.	11, 1889	June 25, 1885	20	M. G. Crosby
The Mutual Ditch . . . . .	Big Grizzly river.	Oct.	13, 1889	Aug. 30, 1888	115	William McConaughy <i>et al</i>
The Davids Ditch . . . . .	Arapahoe creek . .	Oct.	18, 1889	Oct. 4, 1889	26	Robert M. Davids & Co
The Lawrence Ditch No. 1 . . . . .	Indian creek . . . .	Oct.	24, 1889	April 12, 1887	6	J. C. and C. E. Lawrence
The Lawrence Ditch No. 2 . . . . .	Arapahoe creek . .	Oct.	24, 1889	April 25, 1886	3	J. C. and C. E. Lawrence
The Marr Ditch No. 1 . . . . .	Little Grizzly river.	Nov.	1, 1889	April 10, 1883	33	William Marr
The Marr Ditch No. 2 . . . . .	Big Grizzly river . .	Nov.	1, 1889	May 1, 1887	30	William Marr
The Pleasant Valley Ditch . . . . .	North Fork river . .	Nov.	1, 1889	Oct. 18, 1889	39	A. E. Hill
The Castle Ditch . . . . .	Big Grizzly river . .	Nov.	2, 1889	April 15, 1885	41	Geo. W. Bailey and Dennis O'Brien
The Nile Ditch . . . . .	North Platte river .	Nov.	2, 1889	May 1, 1888	Not given	Fletcher Campbell
The Norris Ditch . . . . .	Roaring Fork . . . .	Nov.	4, 1889	June 1, 1889	Not given	William P. Norris
The Van Patten Ditch . . . . .	Buffalo creek . . . .	Nov.	6, 1889	April 20, 1888	Not given	Ernest Van Patten
The Arapahoe Ditch, amend. stmt.	Not given . . . . .	Nov.	25, 1889	April 1, 1885,	Not given	R. B. and W. W. Spaulding
The Badger State Ditch . . . . .	Coyote creek . . . .	Nov.	30, 1889	June 16, 1884	4	Charles Bock
The Addison Ditch . . . . .	Buffalo creek . . . .	Nov.	30, 1889	Sept. 15, 1883	14	Addison C. Ridings
The Clifton Ditch . . . . .	Buffalo creek . . . .	Nov.	30, 1889	May 7, 1887	3	Addison C. Ridings
The Spicer Ditch, enlarg. & ext'n	Big Grizzly river . .	Dec.	6, 1889	Mar. 3, 1889	18	James Taylor and James Macfarlane

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Mitchell Ditch . . . . .	Cheyenne creek . .	Dec. 26, 1889	May 1, 1888	25	John Mitchell <i>et al</i>
The Luck Penny Ditch . . . . .	Beaver creek. . . .	Dec. 27, 1889	May 1, 1889	10	Silas Haskins <i>et al</i>
The Little Nellie Ditch, enlarg'm't	North Fork river. .	Jan. 24, 1890	April 1, 1886	11	John W. Riggan
The Hight Ditch No. 1 . . . . .	Roaring Fork . .	Mar. 6, 1890	April 18, 1889	9	Helen Wolfer and Edward Norris
The Cochrane Ditch . . . . .	Coyote creek. . . .	April 14, 1890	April 20, 1887	3	John M. Cochrane
The Slack Ditch . . . . .	Buffalo creek. . . .	April 19, 1890	Nov. 13, 1887	20	Daniel McIsaac <i>et al</i>
The Roaring Ditch . . . . .	South Roaring Fork	May 9, 1890	Oct. 7, 1889	35	John Mitchell <i>et al</i>
The Castle Ditch, enlarg. & ext'n	Big Grizzly river. .	May 19, 1890	April 25, 1888	36	James Macfarlane
The Slack and Weiss Ditch . . . .	Vinegar creek . .	Aug. 23, 1890	June 3, 1890	4	John Slack and Andrew Weiss
The Lyndon Ditch. . . . .	North Buffalo creek	Oct. 2, 1890	Sept. 28, 1890	Not given	L. H. Lyndon

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT NO 46, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Slack & Weiss Reservoir	Vinegar creek . . . .	Slack & Weiss . . . .	Aug. 23, 1890	June 3, 1890	1,119,208	John Slack and Andrew Weiss

*Water District No. 47*—W. D. Beckwith, Commissioner, Walden, Larimer County.

Water District No. 47 consists of all lands in the State of Colorado irrigated by water taken from that portion of the North Platte river between Water District No. 46 and the State line of Colorado, and from streams draining into the said portion of the North Platte river, and from Granite and Encampment creeks, and the streams draining into the said creeks.

There being no decrees for this District, the Commissioner was not called out.

# STATEMENT CONCERNING DITCHES

IN DISTRICT No. 47, RELATIVE TO WHICH STATEMENTS HAD BEEN FILED IN THE STATE ENGINEER'S OFFICE, UNDER THE HEAD OF "MISCELLANEOUS" (NORTH PARK, ETC.), PRIOR TO APRIL 17, 1889, THE DATE OF THE FORMATION OF THIS DISTRICT, AND NOW TRANSFERRED TO THE PROPER DISTRICT.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Troy Ditch . . . . .	Owl creek . . . . .	May 31, 1888	April 7, 1888	13	Charles E. Quincy
The North Park Ditch . . . . .	Michigan river . . . . .	June 20, 1888	April 9, 1888	14	Montie Blevins
The Donelson Ditch . . . . .	Little Willow creek . . . . .	June 28, 1888	May 4, 1885	23	W. F. Donelson
The Essex Ditch . . . . .	School creek . . . . .	July 2, 1888	June 4, 1888	14	Aretas D. Walloer
The Ward Ditch No. 1 . . . . .	Illinois creek . . . . .	July 5, 1888	April 5, 1888	12	M. C. Ward, H. C. Boston
The Ward Ditch No. 2 . . . . .	Illinois creek . . . . .	July 5, 1888	April 5, 1888	7	M. C. Ward, H. C. Boston
The Soldiers' Home Creek . . . . .	Owl creek . . . . .	July 23, 1888	May 20, 1885	11	Thomas Vils
The Bern Ditch . . . . .	Big Government c'k . . . . .	July 23, 1888	June 29, 1888	12	Casper Fox, Peter Fox
The Custer Mountain Ditch . . . . .	Michigan river . . . . .	July 28, 1888	April 18, 1888	28	Edmund Graves, James Graves
The Hubbard Ditch No. 1 . . . . .	Illinois creek . . . . .	July 31, 1888	Dec. 1, 1887	10	Edward R. Hubbard
The Hubbard Ditch No. 2 . . . . .	Illinois creek . . . . .	July 31, 1888	June 1, 1888	10	Edward R. Hubbard
The Old S. C. Ditch . . . . .	Michigan river . . . . .	Aug. 25, 1888	July 31, 1888	112	Geo. W. Seifert
The Buckeye Irrigating Ditch . . . . .	Michigan river . . . . .	Sept. 6, 1888	Not stated . .	Not given .	W. F. Fisher, Geo. S. Fleicher
The Col. Davis Ditch No. 1 . . . . .	Michigan river . . . . .	Sept. 6, 1888	Not stated . .	Not given .	Collin E. Davis



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Boomerang Ditch . . . . .	Michigan river . . . . .	Sept. 25, 1888	Sept. 14, 1888	14	Geo. Birkett
The Owl Creek Ditch . . . . .	Owl creek . . . . .	Sept. 29, 1888	June 15, 1876	28	August Speck <i>et al</i>
The Poverty Flat Ditch No. 2 . . . . .	Michigan river . . . . .	Oct. 9, 1888	Sept. 26, 1888	34	Salem M. Hardy
The Kiowa Ditch . . . . .	Michigan river . . . . .	Oct. 16, 1888	Sept. 14, 1886	11	Geo. Birkett
The Lost Treasure Ditch . . . . .	Michigan river . . . . .	Oct. 23, 1888	Sept. 27, 1888	132	Gilbert Hayes <i>et al</i>
The Lowland Ditch . . . . .	Owl creek . . . . .	Oct. 23, 1888	June 10, 1884	Not given	Gilbert Hayes, Carl D. Muller
The Bostwick Ditch . . . . .	Michigan river . . . . .	Nov. 6, 1888	May 17, 1887	About 8	Samuel E. Bostwick
The Edith Ditch . . . . .	Michigan river . . . . .	Nov. 6, 1888	June 15, 1886	Same	Samuel E. Bostwick
The Lowland Ditch, enl. & ext'd . . . . .	Owl creek . . . . .	Nov. 9, 1888	Oct. 30, 1888	About 7	Sam Carden
The Home Ditch No. 1 . . . . .	Illinois river . . . . .	Nov. 13, 1888	May 6, 1883	16	J. H. Greene, A. W. Greene
The Home Ditch No. 2 . . . . .	Illinois river . . . . .	Nov. 13, 1888	June 10, 1885	11	J. H. Greene, A. W. Greene
The Poquette Ditch . . . . .	Michigan river . . . . .	Nov. 19, 1888	Not stated		Louis G. Poquette
The Roll Ditch . . . . .	Jack creek . . . . .	Nov. 20, 1888	Not stated		L. P. Roll
The Pinkham Ditch . . . . .	Pinkham creek . . . . .	Nov. 22, 1888	Not stated		James O. Pinkham
The Stevenson Ditch No. 1 . . . . .	Willow creek . . . . .	Nov. 22, 1888	Not stated		Edward P. Stevenson
The Stevenson Ditch No. 2 . . . . .	Willow creek . . . . .	Nov. 22, 1888	Not stated		Edward P. Stevenson
The Stevenson Ditch No. 3 . . . . .	Willow creek . . . . .	Nov. 22, 1888	Not stated		Edward P. Stevenson

The Brennan Ditch . . . . .	Sand creek . . . . .	Nov. 28, 1888	Not stated	Not given	Susan Brennan
The Hunter Ditch No. 1 . . . . .	Pinkham creek . . . . .	Nov. 28, 1888	Not stated	Not given	Jennie H. Hunter
The Hunter Ditch No. 2 . . . . .	Pinkham creek . . . . .	Nov. 28, 1888	Not stated	Not given	Jennie H. Hunter
The Crouter Ditch No. 1 . . . . .	Illinois river . . . . .	Dec. 14, 1888	June 5, 1887	Not given	C. W. Crouter
The Crouter Ditch No. 2 . . . . .	Illinois river . . . . .	Dec. 14, 1888	Sept. 25, 1888	Not given	A. M. Hill, G. S. Hill
The Moore Ditch No. 1 . . . . .	Government creek . . . . .	Dec. 14, 1888	Spring, 1884	Not given	C. P. Crouter, A. M. Hill, G. S. Hill
The Moore Ditch No. 2 . . . . .	Michigan river . . . . .	Dec. 14, 1888	Spring, 1885	Not given	Daniel L. Moore
The Moore Ditch No. 3 . . . . .	Michigan river . . . . .	Dec. 14, 1888	Spring, 1888	Not given	Daniel L. Moore
The Kelley Ditch . . . . .	Pinkham creek . . . . .	Feb. 2, 1889	Summer, 1887	Not given	Daniel L. Moore
The Seneca Ditch . . . . .	Michigan river . . . . .	Feb. 2, 1889	April 12, 1887	21	J. J. Walker, J. L. & John W. Kelley
The Matthews Ditch . . . . .	Michigan river . . . . .	Mar. 18, 1889	Oct., 1884	15.97	Benton Miles
The Salem Ditch . . . . .	Willow creek . . . . .	Mar. 27, 1889	May 5, 1881	11	Reid Matthews
The Accommodation Ditch . . . . .	Jack creek . . . . .	Mar. 28, 1889	July 15, 1887	52	Arthur H. Pomeroy
The Newport Ditch . . . . .	Pinkham creek . . . . .	April 5, 1889	July 15, 1881	5	Peter Munroe <i>et al</i>
The Col. Davis Ditch No. 1, { amended statement of . . . }	Michigan river . . . . .	April 13, 1889	Oct. 15, 1887	45	Edward Leeds
					Collin E. Davis

## STATEMENT CONCERNING DITCHES.

IN WATER DISTRICT No. 47, RELATIVE TO WHICH PLATS AND STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE FROM APRIL 17, 1889 (THE DATE OF THE FORMATION OF THIS DISTRICT), TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Olive Ditch . . . . .	Illinois river . . . . .	April 22, 1889	April 9, 1889	7	Charles Snyder
The Shearer Ditch . . . . .	Little Willow creek . . . .	April 25, 1889	April 16, 1885	11	William J. Shearer
The Shearer Ditch No. 2 . . . .	Little Willow creek . . . .	April 25, 1889	Mar 22, 1885	11	William J. Shearer
The Oklahoma Ditch . . . . .	Illinois river . . . . .	April 26, 1889	April 8, 1889	34	Monte Blevins
The Ruction Ditch . . . . .	Michigan river . . . . .	May 2, 1889	April 21, 1885	11	Monte Blevins
The East Lynne Ditch . . . . .	Big creek . . . . .	May 4, 1889	April 17, 1889	14	George O. Elmes and Albert Reed
The Ivy Ditch . . . . .	Jack creek . . . . .	May 18, 1889	May 14, 1888	8	William L. Riddle and Lafrance P. Roll
The Walden Ditch . . . . .	Michigan river . . . . .	May 29, 1889	May 12, 1885	11	E. A. Barber and Hugh Griffith
The Lower Walden Ditch . . . .	Michigan river . . . . .	May 29, 1889	May 12, 1885	11	Hugh Griffith
The Phillips Ditch . . . . .	Deer creek . . . . .	May 29, 1889	July 21, 1886	5	Charles Phillips
The Mansfield Ditch No. 1 . . .	Michigan river . . . . .	June 4, 1889	April 1, 1886	6	William Mansfield
The Mansfield Ditch No. 2 . . .	Michigan river . . . . .	June 4, 1889	April 15, 1888	1.30	William Mansfield
The Willow Ditch . . . . .	Owl Mountain spring . . . .	June 10, 1889	May 29, 1889	5	Mrs. O. L. Brocker
The Timber Line Ditch . . . . .	Big creek . . . . .	June 11, 1889	April 18, 1889	8	Henry P. Baugh and George Eckhardt

The Alkali Flat Ditch . . . . .	Alkali Flat spring . . . . .	June 13, 1889	May 20, 1889	5	Monte Blevins . . . . .
The Carpenter Ditch . . . . .	Canadian river . . . . .	June 22, 1889	April 9, 1889	14	Frank G. Carpenter . . . . .
The Phelan Ditch . . . . .	McKenzie creek . . . . .	June 22, 1889	April 9, 1889	7	Charles J. Phelan . . . . .
The Monroe Ditch . . . . .	Illinois river . . . . .	June 22, 1889	May 5, 1885	14	Peter F. Monroe . . . . .
The Government Ditch No. 1 . . . . .	Government creek . . . . .	June 25, 1889	Aug. 1, 1884	5	Benjamin Cross and George F. Scott . . . . .
The Government Ditch No. 2 . . . . .	Government creek . . . . .	June 25, 1889	Oct. 1, 1885	23	Benjamin Cross <i>et al</i> . . . . .
The Park Neck Ditch . . . . .	Camp creek . . . . .	July 11, 1889	June 12, 1888	7	A. W. Lawrence . . . . .
The Howard Ditch . . . . .	Big Willow creek . . . . .	Aug. 6, 1889	June 1, 1888	28	H. L. Howard <i>et al</i> . . . . .
The Hard Work Ditch . . . . .	Pinkham creek . . . . .	Aug. 6, 1889	July 15, 1889	13.09	Mary L. Moore <i>et al</i> . . . . .
The John S. Sutton Ditch . . . . .	Jack creek . . . . .	Aug. 12, 1889	May 15, 1889	13	John S. Sutton and George W. Hinch . . . . .
The Gillett Ditch No. 1 . . . . .	Muddy creek . . . . .	Aug. 17, 1889	May 16, 1887	56.50	Leslie Gillett . . . . .
The Gillett Ditch No. 2 . . . . .	Clear creek . . . . .	Aug. 17, 1889	July 11, 1889	68	Leslie Gillett . . . . .
The Gillett Ditch No. 3 . . . . .	Willow creek . . . . .	Aug. 17, 1889	July 11, 1889	40	Leslie Gillett . . . . .
The Pomroy Ditch No. 1 . . . . .	Canadian river . . . . .	Aug. 17, 1889	April 1, 1887	56.50	Leslie Gillett . . . . .
The Sidduth Ditch No. 1 . . . . .	Cabin creek . . . . .	Aug. 17, 1889	June, 1886	11.50	David F. Sidduth . . . . .
The Lost Ditch . . . . .	Willow creek . . . . .	Aug. 23, 1889	June 11, 1889	15	Charles Dow . . . . .
The Park View Ditch . . . . .	Illinois river . . . . .	Sept. 11, 1889	June 16, 1887	6	Charles Snyder . . . . .
The Huckleberry Ditch . . . . .	Big creek . . . . .	Sept. 18, 1889	Aug. 31, 1889	15.63	Edward L. Wheeler . . . . .
The Plainwell Ditch . . . . .	Big creek . . . . .	Sept. 18, 1889	May 27, 1887	14	Edward L. and Robert L. Wheeler . . . . .
The Lizzie Ditch . . . . .	Elk creek . . . . .	Sept. 25, 1889	May 15, 1888	4	Robert G. Kerr . . . . .
The Boyer Ditch . . . . .	Canadian river . . . . .	Sept. 25, 1889	June 15, 1887	11	Franklin Boyer . . . . .
The Give-a-Dam Jones . . . . .	Canadian river . . . . .	Sept. 25, 1889	Sept. 16, 1889	39	George M. Bassett <i>et al</i> . . . . .

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Toledo Ditch . . . . .	Allen creek . . . . .	Sept. 25, 1889	May 31, 1889	15	William Kerr
The Oxford Ditch . . . . .	Government creek . . . . .	Sept. 25, 1889	Sept. 25, 1887	5	William Payne
The Carlton Ditch . . . . .	Michigan river . . . . .	Sept. 28, 1889	May 15, 1889	13	H. C. Hilliard
The Seneca Ditch, enlargement .	Michigan river . . . . .	Sept. 30, 1889	Sept. 1, 1887	Not given .	Charles H. Cowdrey
The Hi-ho Ditch No. 1 . . . . .	Michigan river . . . . .	Oct. 1, 1889	April, 1883	.....	Geo. Birkett and D. L. Moore
The White Ditch . . . . .	West Branch Indian creek	Oct. 2, 1889	June 10, 1889	8	William H. White
The Ish Ditch . . . . .	W. Br. Big Willow creek . .	Oct. 5, 1889	June 17, 1887	5	John L. Ish and James W. Sutton
The William Kerr Ditch No. 1 . .	Elk creek . . . . .	Oct. 5, 1889	May, 1885	20	William Kerr and Robert G. Kerr
The Rattler Ditch . . . . .	W. Br. Big Willow creek . .	Oct. 5, 1889	June 1, 1888	.....	Sterling P. Ish and John L. Ish
The Maggie Ditch No. 1 . . . . .	Allen creek . . . . .	Oct. 5, 1889	April, 1887	11	William Kerr
The No. 1 Ditch . . . . .	Jack creek . . . . .	Oct. 7, 1889	June 1, 1888	8	William L. Riddle and M. C. Wythe
The Sanborn Ditch . . . . .	Indian river . . . . .	Oct. 7, 1889	Sept. 26, 1887	28	Augustus E. Dwinell <i>et al</i>
The Bennett-Hubbard Ditch . . .	A spring . . . . .	Oct. 7, 1889	Sept. 5, 1882	3	P. H. Van Clea and W. H. Hubbard
The Wycoff Ditch . . . . .	W. Br. Big Willow creek . .	Oct. 7, 1889	May 17, 1889	8	David P. Wycoff and Sterling P. Ish
The Leonard Ditch . . . . .	Illinois river . . . . .	Oct. 8, 1889	Aug. 15, 1884	8	John C. Howard
The Ottawa Ditch . . . . .	Illinois river . . . . .	Oct. 8, 1889	April 15, 1888	5	John C. Howard
The Slew Ditch . . . . .	Illinois river . . . . .	Oct. 8, 1889	Oct. 25, 1887	5	William L. Howard



The Cochran Ditch . . . . .	Big Willow creek . . . . .	Oct.	7, 1889	July 15, 1882	2.50	Henry H. Shomber
The Kerr Ditch . . . . .	Little Willow creek . . . . .	Oct.	7, 1889	May 15, 1882	5	Henry H. Shomber and Joseph Wyckoff
The Snide Ditch . . . . .	Little Willow creek . . . . .	Oct.	7, 1889	July 1, 1885	2.50	Henry H. Shomber
The Hi-ho Ditch No. 1 . . . . .	Michigan river . . . . .	Oct.	8, 1889	April, 1883	20.80	George Birkeitt
The Overland Ditch . . . . .	Michigan river . . . . .	Oct.	9, 1889	June 3, 1887	58	John A. Howard and Michael Connors
The Munroe Ditch . . . . .	Illinois river . . . . .	Oct.	9, 1889	May 5, 1885	13	Peter Munroe
The Poverty Flat Ditch No. 2 . . . . .	Michigan river . . . . .	Oct.	10, 1889	Sept. 26, 1888	34	Salem H. Hardy
The School Section Ditch . . . . .	East Fork Willow creek . . . . .	Oct.	10, 1889	May 15, 1888	4	Henry H. Hawkins and Cleon K. Mallonoe
The James W. Sutton Ditch No. 2 . . . . .	E. Fork Big Willow creek . . . . .	Oct.	12, 1889	May 15, 1886	5	James W. Sutton and Nannie Sutton
The Alma Ditch No. 1 . . . . .	Michigan river . . . . .	Oct.	15, 1889	July 1, 1889	20	Norman R. McDonald
The Buckeye Ditch No. 1 . . . . .	Michigan river . . . . .	Oct.	15, 1889	April 15, 1885	16	George S. Fletcher and W. S. Fisher
The Enlargement of the same . . . . .	Michigan river . . . . .	Oct.	15, 1889	Sept. 11, 1889		W. F. Fisher and George S. Fletcher
The Champion Ditch No. 1 . . . . .	Michigan river . . . . .	Oct.	15, 1889	April 20, 1883	21	Collin E. Davis
The Everhard & Baldwin Ditch . . . . .	Illinois river . . . . .	Oct.	21, 1889	May 24, 1887	50	Edwin D. Baldwin
The Pioneer Ditch . . . . .	Illinois river . . . . .	Oct.	21, 1889	Aug. 8, 1884	35	Edwin D. Baldwin
The Martin Ditch No. 1 . . . . .	Michigan river . . . . .	Oct.	22, 1889	June 1, 1883	18	William Martin
The Mathews Eastern Ditch . . . . .	Michigan river . . . . .	Oct.	22, 1889	Sept. 20, 1888	15	James Mathews
The End o Mile Ditch . . . . .	Illinois river . . . . .	Oct.	23, 1889	June 1, 1883	2	Charles Snyder
The Stevenson Ditch No. 2 . . . . .	Willow creek . . . . .	Oct.	23, 1889	May 1, 1887	8	Edward P. Stevenson
The Stevenson Ditch No. 3 . . . . .	Willow creek . . . . .	Oct.	23, 1889	June 1, 1886	6	Edward P. Stevenson
The Weed Ditch . . . . .	Illinois river . . . . .	Oct.	23, 1885	June 1, 1884	1	Sam Weed
The Kerr Ditch . . . . .	Willow creek . . . . .	Oct.	25, 1889	June 15, 1882	5	Joseph E. Wyckoff



## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Poverty Flat Ditch . . . . .	Michigan river . . . . .	Oct. 25, 1889	May 10, 1888	60	Salem M. Hardy
The Kernode Ditch . . . . .	Canadian river . . . . .	Oct. 26, 1889	April 15, 1889	10	Griffith Kernode
The Yokum Ditch No. 1 . . . . .	Sherman creek . . . . .	Nov. 4, 1889	Spring, 1885		The Knox-Percheron Horse Company
The Yokum Ditch No. 2 . . . . .	Sherman creek . . . . .	Nov. 4, 1889	Spring, 1885		The Knox-Percheron Horse Company
The Crouter Ditch No. 1 . . . . .	Illinois river . . . . .	Nov. 11, 1889	June 5, 1887	40	G. S. Hill
The Hill and Crouter Ditch . . . . .	Illinois river . . . . .	Nov. 11, 1889	Sept. 25, 1888	65	G. S. Hill
The Upland Ditch . . . . .	Illinois river . . . . .	Nov. 11, 1889	Nov. 6, 1889	12	William H. Snyder
The Rhea Ditch . . . . .	Big Beaver creek . . . . .	Nov. 13, 1889	May 20, 1887		Cooke Rhea
The Slew Ditch . . . . .	Illinois river . . . . .	Nov. 13, 1889	Oct. 25, 1887	5	William L. Howard
The Stevenson Ditch No. 2, extension and enlargement . . . . .	Willow creek . . . . .	Nov. 13, 1889	May 1, 1889	7	William L. Howard
The Bona Fide Ditch No. 2 . . . . .	Canadian river . . . . .	Nov. 14, 1889	April 25, 1887	15	William H. Winscom
The Park Ditch . . . . .	Illinois river . . . . .	Nov. 14, 1889	May 12, 1888	14	Taylor B. Geer and Howard B. Dirlam
The Cleveland Ditch . . . . .	Michigan river . . . . .	Nov. 18, 1889	April 20, 1887	14	Otho M. Dnnham
The Old S. C. Ditch, amended statement . . . . .	Michigan river . . . . .	Nov. 18, 1889	July 31, 1888		George W. Seifert
The Walker Ditch No. 1 . . . . .	Pinkham creek . . . . .	Nov. 25, 1889	May 15, 1884	11	James J. Walker
The Leonard Ditch . . . . .	Illinois river . . . . .	Nov. 29, 1889	Aug. 15, 1884	8	John C. Howard
The Ottawa Ditch . . . . .	Illinois river . . . . .	Nov. 29, 1889	April 15, 1888	5	John C. Howard

The Stevenson Ditch No. 4 . . . . .	Willow creek . . . . .	Nov. 29, 1889	Aug. 15, 1888	10	Edward P. Stevenson
The Crystal Spring Ditch . . . . .	Crystal Spring . . . . .	Dec. 19, 1889	May 15, 1887	3	William F. Fisher
The Moore Ditch No. 1 . . . . .	Government creek . . . . .	Dec. 26, 1889	May 15, 1884	8	Joseph A. Moore
The Moore Ditch No. 2 . . . . .	Michigan river . . . . .	Dec. 26, 1889	May 15, 1885	30	Joseph A. Moore
The Moore Ditch No. 3 . . . . .	Michigan river . . . . .	Dec. 26, 1889	May 15, 1888	24	Joseph A. Moore
The Moore Ditch No. 4 . . . . .	Red Cañon creek . . . . .	Dec. 26, 1889	May 15, 1887	3.50	Joseph A. Moore
The Dulaney Ditch . . . . .	Coom creek . . . . .	Dec. 28, 1889	Aug. 10, 1886	5	David E. Dulaney
The Spaulding Ditch . . . . .	Pinkham creek . . . . .	Jan. 7, 1890	May 27, 1887	...	J. Smith Spaulding
The Ferdinando Ditch, amended } statement . . . . .	Cabin creek . . . . .	Jan. 15, 1890	June 3, 1886	...	James F. Bush
The Harvison Ditch . . . . .	Meldrum creek . . . . .	Jan. 20, 1890	May 12, 1887	4	William Y. Harvison
The Flying Dutchman Ditch . . . . .	Illinois river . . . . .	May 7, 1890	June 1, 1884	26	Charles W. Snyder
The Wyckoff Ditch . . . . .	Little Willow creek . . . . .	May 19, 1890	June 14, 1887	15	Edgar J. Wyckoff and William V. Wyckoff
The Wales Ditch . . . . .	Michigan river . . . . .	May 23, 1890	May 14, 1890	80	John Griffith
The Hard Work Ditch . . . . .	Pinkham creek . . . . .	June 2, 1890	July 19, 1889	15	Mary L. Moore
The Moore Ditch . . . . .	Pinkham creek . . . . .	June 2, 1890	Sept. 1, 1887	15	Mary L. Moore
The Michigan High Line Ditch . . . . .	Michigan river . . . . .	June 2, 1890	...	50	John Howard <i>et al</i>
The J. W. Sutton Ditch . . . . .	East Fork Big Willow creek . . . . .	June 4, 1890	May 20, 1882	40	James W. Sutton
The Big Willow Ditch, enlargement't	Big Willow creek . . . . .	June 4, 1890	May 15, 1889	...	Francis S. Preston
The Livingstone Ditch . . . . .	Government creek . . . . .	June 6, 1890	May 1, 1885	...	T. John Payne
The Stevenson Ditch No. 4, en- } largement and extension . . . . .	Willow creek . . . . .	Aug. 2, 1890	Nov. 1, 1889	15	Charles Dow
The Ish Ditch, enlargement . . . . .	West Branch Big Willow c'k . . . . .	Oct. 3, 1890	May 26, 1890	12.60	Anna E. Willis

*Water District No. 48*—No Commissioner appointed.

Water District No. 48 consists of all lands in the State of Colorado, irrigated by water taken from the Big Laramie river, and from the streams draining into the said river.

---

*Water District No. 64*—A. F. Spoor, Commissioner, Sterling, Logan County.

Mr. Spoor reports, for 1889, that irrigation began March 13, with an abundance of water, and that more water was used during the succeeding two months than the entire previous season. About the first of May the Platte river became very low, but on May 20 were followed by a heavy flow in the river until June 25. Pawnee creek had seven floods during the season from which a large supply was obtained and more water ran to waste than was used in irrigation.

Complaint is made of a dirt dam across Big Beaver creek by which the water is diverted in flood times on to the barren prairie to the great damage of several ditches dependent on this stream for much of their water.

The season was a decided improvement over that of 1888 in water supply, and the crops were fairly good.

Mr. Spoor was employed 83 days in 1889.

For 1890, a statistical statement was submitted, but no further details.

Mr. Spoor having removed from the district and engaged in other business, R. J. Patterson was appointed December 2, 1890, on the recommendation of the Commissioners of Logan county, to fill the vacancy.

# COMMISSIONER'S REPORT, A. D. 1890.

28

## DIVISION No. 1—DISTRICT No. 61.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage
The South Platte . . . . .	9	100	10	6,000	150		200	..
The Pawnee . . . . .	23	50	20	30,000	1,200	500	700	..
The Sterling No. 1 . . . . .	15	160	12	5,000	800	1,000	500	..
The Tetsel . . . . .	6	100	4	1,500	80	300	25	..
The Schneider . . . . .	5	160	8	3,000	125	600	150	..
The Henderson and Smith . . . . .	3	130	4	800	100	300	50	..
The Low Line . . . . .	5	100	3	1,800	100	600	130	..
The Iliff and Platte Valley . . . . .	14	120	7	10,000	200	800	50	..
The Sterling No. 2 . . . . .	6	100	5	3,000	200	500	100	..
The Springdale . . . . .	12	40	20	5,000	200	600	200	..
Totals in district . . . . .	98	..	93	66,100	3,155	5,700	2,105	..

Total number of acres irrigated in district, 10,960.

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 64, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL	Total depth thereof, in feet	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
Sterling . . . . .	210	8	96	202	. . .	. . .	. . .	Sec. 32, T. 8 N., R. 52 W	. . . . .	Pump, 2 feet
Town of Sterling . . . . .	245	. . .	. . .	245	. . .	. . .	. . .	Sec. 32, T. 8 N., R. 52 W	. . . . .	. . . . .



## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 64, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Spring Creek Ditch . . . . .	Spring Creek . . .	June 15, 1889	Sept., 1888	1.50	. . . . . Jacob H. Gelnett



*Water District No. 65*—No Commissioner appointed.

Water District No. 65 consists of all lands in the State of Colorado irrigated by water taken from the Middle and North Forks of the Republican river, from Sandy and Frenchman's creeks, and from the tributaries of those streams.

## STATEMENT CONCERNING DITCHES

IN DISTRICT No. 65, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Name of stream from which water is taken	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Wray Ditch . . . . .	Republican river. . .	Jan. 3, 1889	Oct. 4, 1888	36	. . . . . Wm. L. Campbell
The Laird Ditch . . . . .	Republican river.	Jan. 15, 1889	Oct. 20, 1888	36	. . . . . Wm. L. Campbell
The ——— Eleven Ditch . . . . .	N. Fork of Republican	July 26, 1890	April 26, 1888	Not given	. . . . . Joseph W. Bowles

## WATER DIVISION No. 2,

## ARKANSAS DIVISION.

John W. McDaniel, Superintendent of Irrigation; residence, Napesta, Colorado.

The Superintendent of Division No. 2 reports his inability to make a complete statement, from the fact that in many districts water rights have not been adjudicated, and hence Water Commissioners have not been on duty to collect data.

In relation to decrees in certain districts, he recites as follows:

*District No. 11*—Comprehensive and efficient decrees were ordered during the June term of the District Court of this year (1890), and received by me in August following—too late for decretal orders during the irrigating season.

*District No. 12*—Decrees were issued for canals from—

Beaver creek, in April, 1887.

Hardscrabble creek, in October, 1888.

Adobe creek, in October, 1888.

Mineral creek, in October, 1888.

Four-Mile creek, in October, 1888.

Four-Mile creek, in April, 1890. Supplemental.

(Exceptions to be filed and evidence for revision or modification to be completed by February 1, 1891.)

Flint creek, in April, 1890.

*District No. 13*—There are six decrees in Custer county, obtained by individual suits during the years 1881 to 1886, inclusive.

No Water Commissioner appointed.

*Districts Nos. 14 and 15*—Priorities were decreed on the St. Charles and Greenhorn creeks in 1880-4.

Supplemental and revisionary testimony, and the matter of priorities, embracing the whole District, has been in the hands of a referee during the past five years, but the constructing of new and extensive canals has retarded a report. I am informed, however, that report will be made at this November term of court, at Pueblo.

*District No. 16*—Full and comprehensive decrees were ordered in this District in June, 1889. I am informed, however, that the matter is to be re-opened for revisionary testimony.

*Districts Nos. 17, 18, 19, 66 and 67*—Are without decretal orders regarding priorities, but I am informed that the matter has been referred, and that reports may be expected before the next irrigating season.

*Decrees*—The earlier decrees are notably deficient in the absence of specific detail, particularly that of a measured flow of water, the entire acreage of a person being given, regardless of how much land may be situated above any possibility of irrigation from the canal in question.

Decrees are given above the capacity of canal; and decrees, as well as canal capacity, may exceed the area of land actually covered.

The opportunities for contesting litigation are innumerable through faulty and insufficient decrees, and should have remedy by legislation providing specifications in detail necessary to a judicial decree.

A class of people which can least afford litigations, and having fully complied with all legal formalities in giving testimony before referees, should be spared the results of incompetency.

I should state, however, that the later decrees are specified and complete in nearly all matters connected therewith.

*Reports of Water Commissioners*—The reports of Water Commissioners, as transmitted to you, are meagre in detail, and comprising less of fact than of varied and insufficient estimate.

*Causes of Inefficiency*—The causes for this are varied and may be classed as, a lack of comprehension of official requirements; a disinclination or inability to comply therewith; the incompleteness of canals in the matter of head-gates, locks and measuring flumes; the notable absence and need of Water Commissioners in some localities, through the accounts of County Commissioners in limiting the time necessary for a proper performance of official duties, etc., and a refusal to audit and pass the proper bills, and, in some cases, absolute inefficiency.

You will note that in some instances no reports whatever have been rendered, although I forwarded specific instructions and urgent request to each Commissioner the first of October. In one instance the County Commissioners refused to sanction the expenditure necessary to collect data. In another instance, when parties were requested to give information as to crops, use of water etc., they imagined it to be for use against their water rights, and where any information was given we may presume upon its exaggeration.

*Instructions to Officers*—I would suggest in the first place, that comprehensive and specific instructions by circular be sent to each Superintendent and Water Commissioner at the commencement of the irrigating season, for the collection of requisite data during the

exercise of his official duties, and which shall be the result of personal investigation instead of a hasty and imperfect estimate at the end of the season; and further, that the laws regarding head-gates, locks and special facilities should be enforced by specific orders from the State Engineer.

*Legislation*—The system of State control over the use of water as now existing, is inoperative in the fact that the Superintendents and Commissioners are not sufficiently responsible as State officers to the State Engineer; since sufficient service can only be obtained by a careful and vigilant superintendence, and by a complete and entire responsibility to the official head of the State department. Therefore, I would recommend legislation by the Assembly of 1891 to revise and re-enact laws regarding Water Superintendents and Commissioners.

All officers subordinate to the State Engineer should be appointed upon and through his recommendation and with reference to their especial fitness for the position; with provision for removal for cause. The officers should also be recognized and paid by the State through a special tax levied upon each of the respective counties and duly apportioned in the State treasury.

The work is inoperative in many localities through a mistaken idea of economy on the part of the County Commissioners and from other causes; and in the matter of accounts it is of common occurrence that it may take a year to obtain a county warrant good for 80 to 90 per cent. at most; and there are some counties in this division who through the County Commissioners absolutely refuse to recognize any claim only through suit at law.

In making the salaries payable by the State the accounts should be subject to the auditorship and approval of the Superintendent and the State Engineer, thereby making all irrigation officials responsible to him and promoting greater efficiency.

Indirectly referring to the foregoing causes affecting this report, and the fact that in the Arkansas Valley canals for the irrigation of lands remote from the river are just reaching completion, I am unable to give any satisfactory account of the duty of water and the matter of seepage.

*Seepage*—That the seepage is very material is beyond question, and where canals traverse the mesas through favorable or porous soils I have no hesitancy in estimating the amount (while the canals are new and before they have become puddled) to be 5 per cent., and believe it to be more under favorable conditions. Small ditches have been utilized entirely from seepage upon outlying slopes; and where canals are contiguous the supply of water to the lower has naturally been augmented by the higher one.



Under the Rocky Ford Canal there was a very limited area of land affected by seepage until the construction of the Catlin Canal (outlying), after which the area *below the Rocky Ford Canal* was very materially augmented with none in space between.

Quite a large area of land in the Arkansas valley may be said to be damaged by seepage, but the general opinion seems to be that ditching or blind trenches will reclaim nearly all of it.

Seepage from canals taken from the Arkansas river is very material in holding water in reservation, returning it later to the river and thereby tending to equalize the supply.

Water was turned into the Bent-Otero Canal for four days and then shut off; and seepage streams scarcely diminished in volume were running two weeks later, no further supply being given.

*Underflow*—Illustrating the immense underflow of the river, a well at Las Animas supplying the town, 20 feet in diameter and 30 feet deep, has a capacity of 1,100,000 gallons every 24 hours.

*Reservoirs*—Regarding reservoirs, while there are some very large ones projected, the actual utility has not yet been demonstrated. I am informed that while the projected reservoirs may have a valuable practicability, the capacity of the ditches supplying them are limited to the needs of the land, and that the full capacity of the canals during flood times will not admit of deflection of water for storage.

*Evaporation*—During the prevalence of hot dry winds of early spring and summer, the evaporation of still water lashed into spray will amount to quite 4 inches in depth.

It is possible a small proportion of this is due to seepage, but the estimate is intended to allow for that, water being supplied to offset.

I have the honor to remain,

Very respectfully,

Your obedient servant,

JOHN W. McDANIEL,  
*Superintendent Division No. 2.*

NEPESTA, COLORADO, }  
Nov. 20, 1890. }

*Water District No. 10*—Thos. Shideler, Commissioner, Colorado Springs.

No report.



## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 10, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Strong Ditch . . . . .	Monument creek . . . . .	Jan. 2, 1889	Not stated	22	Julia H. Strong
The Hunt & McClellan Pipe Line . . . . .	Douglas creek . . . . .	Jan. 14, 1889	Nov. 12, 1888	2.33	C. T. R. McClelland
The Bauning & Mathews Ditch . . . . .	Cheyenne creek . . . . .	Jan. 16, 1889	Nov. 12, 1888	28	W. M. Banning and Albert Matthews
The Frank Smith Ditch . . . . .	Monument creek . . . . .	Feb. 21, 1889	Jan. 30, 1889	4	Frank Smith
The Baby Green Ditch . . . . .	Monument creek . . . . .	Feb. 21, 1889	Jan. 31, 1889	4	J. W. Green
The Curlew Ditch . . . . .	Monument creek . . . . .	Feb. 21, 1889	Jan. 29, 1889	13	Frank Smith and J. W. Green
The Straw Ditch, enlargement No. 1 . . . . .	Fountain creek . . . . .	April 15, 1889	Dec. 28, 1888	5.70	John Irvine, Jr.
The Corman Ditch No. 2 . . . . .	The King ditch . . . . .	May 2, 1889	April 15, 1889	7.80	A. B. Corman
The Martin & McGovney Ditch . . . . .	Monument creek . . . . .	May 4, 1889	Feb. 1, 1889	(?) 232.00	F. L. Martin and A. A. McGovney
The Austin Bluff City Feeder No. 1 . . . . .	N. Fork Monument c'k . . . . .	May 8, 1889	Jan. 15, 1889	4.70	{ The Austin Bluffs Land & Water Co.
The Waterworks Feeder No. 2 . . . . .	West Monument creek . . . . .	May 8, 1889	Not stated	Not given	

The East Colorado Springs Land and Water Supply Company's Ditch . . . . .	No. 1 . . .	North Cheyenne creek	May 13, 1889	Feb. 12, 1889	13	The East Colorado Springs Land and Water Supply Company
	No. 2 . . .	Bear creek . . . . .	May 13, 1889	Feb. 21, 1889	17.50	
	No. 3 . . .	Bear creek . . . . .	May 13, 1889	Feb. 21, 1889	4.70	
	No. 4 . . .	Sand creek. . . . .	May 13, 1889	Mar. 11, 1889	7.94	
	No. 5 . . .	Sand creek. . . . .	May 13, 1889	Mar. 11, 1889	60	
	No. 6 . . .	Reservoir No. 1. . . .	May 13, 1889	Mar. 18, 1889	10.50	
	No. 7 . . .	Reservoir No. 2 . . . .	May 13, 1889	Mar. 18, 1889	10.50	
The Brookside Spring Ditch. . . . .		The Brookside spring.	May 17, 1889	May 2, 1889	6.10	Florence A. Allen
The Mayo Ditch . . . . .		Swamp on owner's land	May 20, 1889	Mar. 7, 1889	21.50	W. W. Mayo
The Springdale Ditch . . . . .		Natural spring. . . . .	July 6, 1889	April 11, 1889	5	Louis A. Bartlett
The Cottonwood Springs Ditch . . . . .		Cottonwood spring run	Aug 2, 1889	May 4, 1889	5	Charter Oak Live Stock & Land Co.
The Keno Ditch . . . . .		South Beaver creek. . . .	Aug. 3, 1889	May 10, 1889	6.76	Sidney Cone and Jacob Shideler
The Spring Run Ditch. . . . .		Spring run. . . . .	Aug. 5, 1889	May 9, 1889	7.30	Charter Oak Live Stock & Land Co.
The Darr Ditch . . . . .		Cheyenne slough. . . . .	Aug. 19, 1889	April, 1880	2	J. M. Darr and Mark L. Darr
The Arapahoe Ditch, extension of		Beaver creek . . . . .	Oct. 4, 1889	1885	19.57	Mary T. Pring
The Green Mountain Falls Town Improvement Company's Water System . . . . .		Fountain creek. . . . .	Oct. 4, 1889	Aug. 29, 1889	11.60	The Green Mountain Falls Town and Improvement Co.
The Wheeler Ditch . . . . .		Fountain creek . . . . .	Oct. 9, 1889	July 15, 1889	6.20	Hattie M. Wheeler
The Alley Ditch . . . . .		A spring in 25, 14, 67. . .	Oct. 24, 1889	Oct. 18, 1889	3.36	John H. Bruening
The Arapahoe Ditch. . . . .		West Br. Beaver creek	Oct. 24, 1889	June, 1868	19.57	H. S. Roberts
The Monitor Ditch . . . . .		Monument creek. . . . .	Oct. 24, 1889	June, 1868	19.57	H. S. Roberts
The Cozzens Ditch No. 1. . . . .		Smith creek . . . . .	Nov. 8, 1889	.....	.....	.....
The Cozzens Ditch No. 2. . . . .		Smith creek . . . . .	Nov. 8, 1889	June, 1870	10.18	Sarah A. Reynolds

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Reynolds Ditch No. 2 . . . . .	Smith creek . . . . .	Nov. 8, 1889	Aug. 21, 1889	9.16	. . . . . Sarah A. Reynolds
The Monument Pipe Line . . . . .	South Beaver creek . . . . .	Nov. 19, 1889	Nov. 19, 1889	.76	. . . . . The Town of Monument
The Sheep Creek Pipe Line . . . . .	Sheep creek . . . . .	Nov. 29, 1889	. . . . .	.52	{ . . . . . Thos. T. Falgrove
The Lion Creek Pipe Line . . . . .	Lion creek . . . . .	Nov. 29, 1889	Oct., 1889	.63	{ . . . . . The East Colorado Springs Land and Water Supply Company.
The East Colorado Springs Land and Water Company's Ditch and Pipe Line. . . . .	Sand creek . . . . .	Dec. 7, 1889	Sept. 10, 1889	15	{ . . . . . Nathan S. Culver
The Ute Pass Ditches . . . . .	Fountain creeks . . . . .	Dec. 19, 1889	{ Sept. 20, 1889 Sept. 24, 1889	16 36.76	{ . . . . . George Hartig
The Yankee Girl . . . . .	. . . . .	. . . . .	{ Oct. 7, 1889 Oct. 7, 1889	6.50 6.50	{ . . . . .
The North Star . . . . .	. . . . .	. . . . .	Dec. 16, 1889	6.50	. . . . .
The South Star . . . . .	Lion creek . . . . .	Jan. 4, 1890	Dec. 15, 1889	6.50	. . . . .
The Welch . . . . .	. . . . .	. . . . .	{ Dec. 15, 1889 Dec. 15, 1889	6.50 6.50	{ . . . . . The Enterprise Ditch Company
The Spring . . . . .	. . . . .	. . . . .	Dec. 26, 1889	31.35	. . . . . Harry O. D. McCurdy
The Enterprise Ditch . . . . .	Monument creek . . . . .	Jan. 13, 1890	Jan. 28, 1890	5.66	. . . . . John Simmons
The Keystone Ditch . . . . .	Sand creek . . . . .	Feb. 8, 1890	Dec. 7, 1889	5.25	. . . . .
The Simmons Pipe & Ditch Line . . . . .	Sand creek . . . . .	Feb. 15, 1890			

The Wigwam Underground Ditch and Pipe Line. . . . .	Fountain creek, etc. . . . .	Mar. 24, 1890	Dec. 27, 1889	50	Gordon Land
The Wheeler Ditch No. 1 . . . . .	Trout creek . . . . .	Mar. 31, 1890	June, 1882	6.20	Charles Wheeler
The North Colorado Springs Land & Improvement Company's Ditch. . . . .	Monument creek . . . . .	May 5, 1890	Sept. 13, 1889	22	{ The North Colorado Springs Land & Improvement Company
The Loomis Ditch . . . . .	Dry gulch . . . . .	May 8, 1890	Mar. 14, 1890	205	{ O. S. Loomis
The Teachout Ditch . . . . .	Monument creek . . . . .	May 12, 1890	April 4, 1890	2.37	{ H. M. Teachout
The Newton & Roberts Pipe Line . . . . .	{ Waste, seepage and spring waters . . . }	May 20, 1890	Mar. 1, 1890	50	Jas. E. Newton & Eugene W. Roberts
Amended statement of same . . . . .	Same . . . . .	June 10, 1890	Mar. 1, 1890	Same	Same
The J. W. Green Ditch . . . . .	Kettle creek . . . . .	June 11, 1890	April 11, 1890	2.37	James W. Green
The Amber Ditch and Pipe Line . . . . .	Unnamed . . . . .	June 18, 1890	April 29, 1890	3.74	Henry Ambler
The Gover Ditch . . . . .	Talcot Gulch creek . . . . .	July 8, 1890	June 16, 1890	4.20	Mary E. Gover
Auxiliary Pipe and Ditch Line to The Ambler Pipe Line and Ditch . . . . .	Unnamed . . . . .	July 18, 1890	June 5, 1890	2.37	Henry Ambler
The Newton Ditch . . . . .	Springs . . . . .	Aug. 18, 1890	May 20, 1890	4.50	The Newton Lumber Company
The Arroyo Ditch . . . . .	Springs . . . . .	Aug. 22, 1890	Aug. 29, 1889	2.90	Charles A. Lausing
The Tom Wanless Ditch, underground feeders to . . . . .	{ Underground flow of the mountain valley }	Oct. 15, 1890	Sept. 17, 1890	3.98	William M. Strickler
The Ute Pass Land & Water Company's Water System . . . . .	{ Middle Fork of the Fountain qui Bouille }	Oct. 15, 1890	July 17, 1890		The Ute Pass Land & Water Co
The Chilcott Ditch, branch of and feeder to . . . . .	Natural lake & springs	Nov. 8, 1890	July 30, 1890	3	The Chilcott Ditch Company

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 10, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Banning & Matthews Storage Reservoirs	Cheyenne creek.	{ Banning and Matthews }	Jan. 16, 1889	Nov. 12, 1888	3,500	{ W. M. Banning and Al. Matthews }
The Overland Heights Land, Town and Improvement Co's Reservoir	S. Br. Fountain crk	{ Comp'ny's pipe line }	Jan. 31, 1889	Oct. 29, 1888	208,360	{ The Overland Heights Land, Town and Improvement Company }
No. 1 . . . . .					330,000	
No. 2 . . . . .					207,000	
No. 3 . . . . .					207,000	
No. 4 . . . . .					334,000	
No. 5 . . . . .					334,000	
No. 6 . . . . .					12,500	
No. 7 . . . . .					12,500	
No. 8 . . . . .					12,500	
No. 9 . . . . .					12,500	
No. 10 . . . . .					12,500	
No. 11 . . . . .					660,000	
The Johnson Reservoirs	Springs . . . . .	{ Reservoirs directly over springs }	April 8, 1889	Mar. 15, 1889	12,500	{ Timothy E. Johnson }
					12,500	
					12,500	
					12,500	
					12,500	
					660,000	
The Lake Moraine Storage Reservoir	{ Ruxton creek & Lake Moraine }	On the stream	May 9, 1889	Feb. 14, 1889	22,580,000	{ (No. 11, old reservoir enlarged) City of Colorado Springs }

The East Colorado Springs Land and Water Supply Company's Reservoir No. 1	Sand creek . . . .	{ C'mpany's ditch } { and pipe line }	May 13, 1889	Mar. 18, 1889	23,995,210	{ The East Colo. Springs Land and Water Supply Company
The North Colo. Springs Reservoir . . . . .	Monument creek.	On the stream . .	Oct. 14, 1889	Sept. 13, 1889	20,000,000	. . . . . Louis R. Ehrlich
The Wigwam Reservoir . . . . .	Wigwam creek. .	Same . . . . .	Mar. 24, 1890	Dec. 27, 1889	6,000	. . . . . Gordon Land
The Austin Bluff Reservoir . . . . .	W. Monument c'k	Same . . . . .	Mar. 26, 1890	Oct. 16, 1889	12,032,085	Austin Bluff L'd. & Water Co
The North Colo. Springs Land and Improvement Co's Reservoir	Monument c'reek.	Company's ditch	May 5, 1890	Sept. 13, 1889	20,000,000	{ The North Colo. Springs Land & Improv'm't Co.
The Newton & { No. 1 . . . . . } Roberts { No. 2 . . . . . } Reservoirs { No. 3 . . . . . }	{ Waste, Seepage } { and Spring } { waters }	Pipe line . . . .	May 21, 1890	Mar. 1, 1890	{ 70,000 303,325 442,750 }	{ James E. Newton and F. W. Robe
Amended Statement of the same . . . . .	Same . . . . .	Same . . . . .	June 10, 1890	Same . . . . .	Same . . . . .	. . . . . Same
The Pike View Reservoir . . . . .	A spring & flood	Feeder ditch . . .	May 21, 1890	Oct. 1, 1888	275,654	. . . . . A. S. Pope
The Newton { No. 1 . . . . . } Reservoirs { No. 2 . . . . . }	Springs. . . . .	Feeder ditch . . .	Aug. 18, 1890	May 20, 1890	{ 124,000 352,000 }	{ The Newton Lumber Co.
The Frizell { No. 1 . . . . . } Reservoirs { No. 2 . . . . . }	French's creek. .	On stream . . . .	Oct. 1, 1890	. . . . .	{ 1,724,500 gals 2,672,000 gals }	. . . . . William Frizell
The Cottonwood Creek Reservoir . . . . .	Cottonwood creek	On stream . . . .	Oct. 4, 1890	July 10, 1890	10,081,000	. . . Louis R. Ehrlich <i>et al.</i>
The Lake Joy Storage Reservoir . . . . .	{ Fontaine qui } Bouille	Tom Wantless . .	Oct. 15, 1890	Mar. 1, 1890	5,220,000	. . . William M. Strickler



## STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT No. 10, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON Sec. T.S. R.W.		Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
21	12	67	115	18	Earth	.....	26,000	Irrigation and domestic	{ N. Fk. W. Mon- ument creek.
36	12	67	44	18	Stone & earth	\$ 5,000 00	600,000	Irrigation, domestic and ice	W. Monum't crk
36	12	67	6.64	.....	Earth	5,000 00	1,200,000	Irrigation, domestic and ice	W. Monum't crk
25	12	68	360	.....	Earth & stone	14,000 00	12,032,085	Domestic and irrigation	W. Monum't crk
27	13	65	450	.....	Earth	500 00	230,000	Domestic and irrigation	. Bierstadt creek
2	and 3	.....	150	9	Earth & stone	1,000 00	100,000	Domestic and irrigation	Stream unnam'd
13		.....	.....	9	Earth & stone	1,000 00	200,000	Domestic and irrigation	Stream unnam'd
23		.....	200	9	Earth & stone	1,000 00	60,000	Domestic and irrigation	Stream unnam'd
23	13	67	1.36	.....	Earth	500 00	275,654	Domestic and irrigation	Springs & floods
26	13	68	.....	.....	Earth	.....	208,360	Domestic	{ South Fork of Fountain creek
11	14	66	.....	.....	Earth	.....	23,905,210	Irrigation and domestic	. . . Ruxton creek
31	14	66	170	.....	Earth	2,000 00	200,000	Irrigation and domestic	So. Spring creek
31	14	66	197	.....	Earth	2,300 00	475,000	Irrigation and domestic	So. Spring creek
35	14	66	3,800	15	Earth	2,128 00	8,933,333	Irrigation	Cheyenne creek
12	14	67	200	14	Earth	200 00	.....	Irrigation	. . . Springs

13	14	67	4.61			Earth	1,500 00	1,205,280	Ice pond	Bear creek
25	14	67	.75			Earth	1,000 00	330,000	Irrigation and domestic	Natural Springs
25	14	67	.50			Earth	1,000 00	207,000	Irrigation and domestic	Natural Springs
25	14	67	.50			Earth	1,000 00	207,000	Irrigation and domestic	Natural Springs
25	14	67	.91			Earth	1,000 00	334,000	Irrigation and domestic	Natural Springs
25	14	67	.91			Earth	1,000 00	334,000	Irrigation and domestic	Natural Springs
25	14	67	50 x 50		10	Earth	200 00	12,500		
25	14	67	50 x 50		10	Earth	200 00	12,500		
25	14	67	50 x 50		10	Earth	200 00	12,500	Irrigation, domestic and other lawful purposes	Natural Springs
25	14	67	50 x 50		10	Earth	200 00	12,500		
25	14	67	50 x 50		10	Earth	200 00	12,500		
26	11	67	1.87			Earth	1,000 00	660,000	Irrigation and domestic	Natural Springs
25	14	67	.73		5	Earth	500 00	160,635	Irrigation and domestic	Cheyenne creek
25	14	67	1.50		10	Earth	200 00			Cheyenne creek
36	14	67		1,150	8	Earth	1,400 00	250,000	Ice and irrigation	Cheyenne creek { Broadmoor Spring Run
36	14	67		550		Earth	2,000 00	2,000,000	Irrigation and domestic	{ Broadmoor Spring Run
36	14	67		427		Earth	23,712 00	1,880,000	Irrigation and domestic	{ Broadmoor Spring Run
25 and 36	14	68		1,000		Earth&rock		54,000,000	Irrigation and domestic	Boehmer, Big- horn and Sack- ett creeks.
				800		Earth&rock	6,400 00	40,800,000	Irrigation and domestic	
				100		Earth&rock	2,400 00	34,000,000	Irrigation and domestic	
						Earth&rock				
30 and 31	14	69		150		Earth&rock	1,500 00	2,400,000	Irrigation and domestic	
				300		Earth&rock	1,700 00	2,100,000	Irrigation and domestic	
				500		Earth&rock		6,600,000	Irrigation and domestic	

STATEMENT CONCERNING RESERVOIRS—*Concluded.*

LOCATION ON Sec T. S. R. W.		Area in acres	Length of dam in feet	Greatest depth of dam in feet	Material used in construction	Estimated cost	Capacity in cubic feet	Purpose for which water is stored	SOURCE OF SUPPLY
24	14	69	250	.....	Earth & stone	\$ 1,000 00	10,000,000	Irrigation and domestic . . . . .	Branch of Beaver creek
24	14	69	800	.....	Earth & stone	2,500 00	60,000,000	Irrigation and domestic . . . . .	Branch of Beaver creek
21	15	66	.....	.....	Earth . . .	5,000 00	21,500,000	Irrigation . . . . .	Fountain creek
16	16	66	.....	.....	Earth . . .	2,500 00	8,702,600	Irrigation and domestic . . . . .	Little Fountain creek

## STATEMENTS CONCERNING RESERVOIR SITES

UNIMPROVED IN DISTRICT NO. 10, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON			Estimated area in acres	Length of dam in feet about	Greatest depth of dam in feet about	Material convenient for construction	Estimated cost	Estimated capacity in cubic feet	Source of supply	REMARKS
Sec.	T. S.	R. W.								
NW	35	14	67	500	28	. . . . .	\$ 5,000 00	5,000,000	Cheyenne creek	. . . . .
NE	8	17	65	700	10	Earth . . .	. . . . .	3,000,000	{ Thos. Wanlews Ditch	{ . . . . .
SE	17	14	66	2,200	15	. . . . .	6,000 00	59,000,000	City water supply	. . . . .
	32	14	68	800	30	. . . . .	12,000 00	60,000,000	Beaver creek . . .	. . . . .
	21	14	68	385	30	. . . . .	. . . . .	22,580,000	{ Ruxton creek & Lake Moraine	{ . . . . .
SE	3	14	67	1,300	. . . . .	. . . . .	10,000 00	9,000,000	Camp creek . . .	. . . . .
	25	14	67	. . . . .	10	Earth . . .	200 00	. . . . .	Cheyenne creek .	. . . . .
	34	13	65	750	. . . . .	. . . . .	. . . . .	230,000	Bierstadt creek..	. . . . .

## STATEMENTS CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 16, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1900.

NAME OF OWNER OR WELL	Total depth thereof in feet	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in Gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
City of Colorado Springs.	1,120							T. 14 S., R. 66 W . . . .	. . . .	{ Abandoned on account of disagreement of city council

*Water District No. 11*—S. K. Sterling, Commissioner, Brown's Cañon, Chaffee county.

Mr. Sterling reports for the year 1890, having been called out August 11, and that he gave 45 days service, with nine days additional for an assistant.

He states that much water is wasted by the continuous flooding of meadows during the season, and to the injury of the land and crops; that 211 ditches have carried water, irrigating in alfalfa, 1,145 acres; seeded grasses, 2,422 acres; natural meadows, 3,994 acres; and all other crops, 7,491 acres; lawns and trees, 580 acres, and 480 acres irrigated from seepage; total acreage cultivated and irrigated, 15,647 acres, with an abundant supply of water for all purposes.

Mr. Sterling reports much difficulty in regulating the distribution of water to small ditches from want of proper head-gates, and suggests a provision of law, authorizing the Water Commissioner to deny all water to such ditches as are not provided with suitable head-gates, after due notice to the owners thereof, until they are properly equipped.



## COMMISSIONERS REPORT, A. D. 1890.

## DIVISION No. 2—DISTRICT No. 11.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet, per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Trout Creek Ditch . . . . .	.25	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	50	. . . . .	. . . . .
The Leesmeagh Ditch . . . . .	1.50	145	. . . . .	. . . . .	. . . . .	. . . . .	70	. . . . .	. . . . .	. . . . .
The Thompson Ditch . . . . .	1	105	. . . . .	. . . . .	. . . . .	. . . . .	75	. . . . .	. . . . .	. . . . .
The Gilliland Ditch . . . . .	.25	90	. . . . .	. . . . .	. . . . .	. . . . .	60	82	. . . . .	. . . . .
The Three Mile Ditch . . . . .	3.25	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	17	. . . . .	. . . . .
The Smith Ditch . . . . .	.25	110	. . . . .	. . . . .	. . . . .	. . . . .	80	20	. . . . .	. . . . .
The Herrington Ditch . . . . .	4	165	. . . . .	55	. . . . .	. . . . .	. . . . .	120	. . . . .	. . . . .
The Tennessee Ditch . . . . .	2	90	. . . . .	. . . . .	. . . . .	. . . . .	50	64	. . . . .	. . . . .
The Prior Right Ditch . . . . .	1	150	. . . . .	. . . . .	. . . . .	15	. . . . .	6	. . . . .	. . . . .
The Mahan Ditch . . . . .	.50	180	. . . . .	. . . . .	. . . . .	15	. . . . .	6	. . . . .	. . . . .
The Evans Ditch . . . . .	.50	105	. . . . .	. . . . .	. . . . .	. . . . .	38	22	. . . . .	. . . . .
The McFarland Ditch . . . . .	.75	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	6	. . . . .	. . . . .
The Pioneer Ditch . . . . .	2.50	90	. . . . .	2	4	. . . . .	240	113	. . . . .	. . . . .

Ditch	1	75	20	40	10
The Gorrel Ditch . . . . .		75			
The Cottonwood Irrigating Ditch . . .	3.50	120			60
The Burnett Ditch . . . . .	2	150	4	5	93
* The Boon Ditch No. 1 . . . . .					
The Chalk Creek Mill Ditch . . . . .	1.50	320		5	5
The Noland Ditch . . . . .	6	120			205
The Bray Ditch . . . . .	1.50	150		30	60
The Cameron Ditch . . . . .	8	180	50		200
The Ehrhart and Bertschy Ditch . .	1.50	120		40	160
The McPherson Ditch . . . . .	.50	60		30	28
The Mundlein Ditch No. 1 . . . . .	2.50	180		22	
The Nash Ditch . . . . .	1.25	150			20
The Green Gulch Ditch . . . . .	1	90		80	5
† The Boon Ditch No. 2 . . . . .	1.25				
The Empire Creek Ditch . . . . .	.50	90		195	53
The Maxwell Ditch . . . . .	1	120	7	8	13
The Huey Ditch No. 2 . . . . .	.50	90		40	90
The Huey Ditch No. 1 . . . . .	.75	90		40	90
The White Ditch No. 2 . . . . .	1	120			
The Trout Creek Company's Ditch . .	3.50	100			183
The Ronk Ditch . . . . .	2	90			95

\* Not used this season.

† Not in use this season.

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
* The Froelick Ditch . . . . .	.50	. .	. .	. .	. .	. .	. .	. .	. .	. .
The Mandelin Ditch No. 2 . . . .	1	90	. .	. .	30	12	8	14	. .	. .
The W. D. White Ditch . . . . .	.50	90	. .	. .	. .	. .	. .	8	. .	. .
The Spaulding Ditch . . . . .	.50	120	. .	. .	. .	. .	. .	30	. .	. .
The Weber Ditch No. 1 . . . . .	.50	150	. .	. .	. .	. .	. .	15	. .	. .
The Huntzicker Ditch No. 1 . . . .	.75	120	. .	. .	. .	7	8	24	. .	. .
The Henry Ditch . . . . .	.50	90	. .	. .	. .	. .	. .	15	. .	. .
The White Ditch No. 1 . . . . .	1.50	120	. .	. .	7	5	70	20	. .	. .
The Supply Ditch . . . . .	1	90	. .	. .	. .	. .	10	20	. .	. .
The Maxwell Creek Ditch . . . . .	4	75	. .	. .	. .	. .	150	115	. .	. .
The Morrison Creek Ditch . . . .	.25	100	. .	. .	. .	. .	. .	25	. .	. .
The Hill and Sprague Ditch . . . .	6	90	. .	. .	70	. .	. .	177	. .	. .
The McGee Ditch . . . . .	.25	90	. .	. .	. .	. .	. .	5	. .	. .
The Four-Mile Ditch . . . . .	1	150	. .	. .	. .	. .	. .	50	. .	. .

The Williams and Hamm Ditch . . . . .	5	210	. . . . .	. . . . .	82	5	. . . . .	65	. . . . .
The Frantz Ditch . . . . .	3	45	. . . . .	. . . . .	20	. . . . .	. . . . .	135	. . . . .
The Briscoe Ditch . . . . .	3.50	150	. . . . .	. . . . .	18	. . . . .	. . . . .	50	. . . . .
The Wolf and Neerland Ditch . . . . .	2.50	120	. . . . .	. . . . .	. . . . .	25	. . . . .	476	. . . . .
The McPherson and Burnett Ditch . . . . .	1.50	120	. . . . .	. . . . .	. . . . .	. . . . .	10	22	. . . . .
The Williams Ditch . . . . .	.50	60	. . . . .	. . . . .	82	5	. . . . .	65	. . . . .
The Hutchinson Ditch . . . . .	.75	150	. . . . .	. . . . .	5	. . . . .	30	29	. . . . .
The Rhoades Ditch . . . . .	1	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .
The Weber Ditch No. 2 . . . . .	.25	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	28	. . . . .
The Edwards Ditch No. 1 . . . . .	.25	60	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	21	. . . . .
The Hutchinson Ditch No. 2 . . . . .	.75	150	. . . . .	. . . . .	5	. . . . .	30	29	. . . . .
The McKenna Ditch . . . . .	4	75	. . . . .	. . . . .	8	. . . . .	. . . . .	39	. . . . .
The Champ Ditch . . . . .	1	90	. . . . .	. . . . .	. . . . .	7	8	13	. . . . .
The Dickman Ditch Nos. 1 and 2 . . . . .	1.50	120	. . . . .	. . . . .	. . . . .	10	. . . . .	50	. . . . .
The Arkansas Valley Irrigating Co.'s } Ditch . . . . .	2.50	120	. . . . .	. . . . .	5	50	. . . . .	210	. . . . .
The Sand Creek Ditch . . . . .	5	150	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	5	. . . . .
The Hot Creek Ditch . . . . .	.25	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	6	. . . . .
The South Arkansas Water Works } and Irrigation Co.'s Ditch . . . . .	3	240	. . . . .	. . . . .	5	. . . . .	. . . . .	10	. . . . .
The Langhoof Ditch . . . . .	2.50	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	40	. . . . .
The Missouri Park Ditch . . . . .	7	180	. . . . .	. . . . .	149	15	8	971	. . . . .
The Abbott Placer Ditch . . . . .	2	75	. . . . .	. . . . .	. . . . .	245	40	. . . . .	. . . . .

\* Not used this season.

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Paine Ditch. . . . .	.50	90	.	.	.	.	.	20	.	.
The Toncha Springs Acequia Ditch. . .	1	240	.	.	.	.	.	245	.	.
The Willow Dale Ditch. . . . .	2.50	180	.	.	.	.	.	207	.	.
The Del Monte Irrigating Ditch . . .	5	150	.	.	.	65	.	1	.	.
The Willow Creek Ditch . . . . .	.50	150	.	.	.	70	70	.	.	.
The Mitchell Ditches Nos. 1, 2, 3 and 4 .	2	150	.	.	.	210	210	.	.	.
The Harmony Ditch. . . . .	3	150	.	.	.	.	.	190	.	.
The Five-Mile Ditch. . . . .	.50	120	.	.	.	.	.	3	.	.
The McFadden Ditch . . . . .	1	150	.	.	.	35	.	15	.	.
The Spaulding Ditch . . . . .	.50	150	.	.	.	.	.	25	.	.
The River Side Ditch . . . . .	6	175	.	.	.	.	.	328	.	.
The Helena Ditch . . . . .	3	150	.	.	.	.	.	235	.	.
The McPhelmy Ditch . . . . .	1.50	150	.	.	.	.	.	30	.	.
The North Fork Ditch . . . . .	9	180	.	.	.	160	.	252	.	.

The Niles Brothers Ditch . . . . .	1.50	165	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	35	. . . . .
The Richardson Ditch . . . . .	5	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	100	. . . . .
The Abbott & Loper Ditch . . . . .	2	75	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	245	40	. . . . .
The Sites Ditches Nos. 1 and 2 . . . . .	1.50	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	90	. . . . .	. . . . .
The Edwards Ditch No. 2. . . . .	.50	75	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	17	. . . . .
The J. W. Edwards Ditch . . . . .	.50	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	17	. . . . .
The Midway Ditch . . . . .	.50	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	10	. . . . .
* The Six-Mile Ditch . . . . .	.25	. . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Bartholomew Ditch . . . . .	.75	150	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	35	. . . . .
The Bray Ditch . . . . .	1.50	85	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	85	. . . . .
The Gordon Ditch . . . . .	.50	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .
The Dry Field Ditch. . . . .	1.50	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	55	. . . . .
The Newby & Bowring Ditch. . . . .	3.50	150	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	35	5	. . . . .
The Lowland Ditch . . . . .	3	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	59	. . . . .
The Piñon Ditch . . . . .	1.50	65	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	25	. . . . .	. . . . .	. . . . .
The Owens Ditch . . . . .	1.50	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .
The Shamrock Ditch . . . . .	1	90	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	6	. . . . .
The Hogue Ditch . . . . .	3	110	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	118	12	12	. . . . .
The Eureka Ditch. . . . .	3.50	150	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	30	. . . . .
The Spring Creek Ditch. . . . .	1	. . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Del Monte Irrigat. Ditch Nos. 2 & 3	1.50	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	8	. . . . .

\* Not in use this season.



## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Rosedale Ditch . . . . .	.25	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1	. . . . .	. . . . .
The Hoosier Ditch . . . . .	1	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	43	. . . . .	. . . . .
The High Ditch . . . . .	.75	150	. . . . .	. . . . .	8	. . . . .	. . . . .	40	. . . . .	. . . . .
The Rhoades North Side Ditch . . . . .	1	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .	. . . . .
The Ahern Ditch . . . . .	1.50	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .	. . . . .
* The Silver Creek Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Harvard Ditch . . . . .	2	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	17	. . . . .	. . . . .
The Mountain Ditch . . . . .	.50	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	3	. . . . .	. . . . .
The Link & Irving Irrigating Ditch . . . . .	3	150	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	150	. . . . .	. . . . .
The Fifion Cañon Ditch . . . . .	.50	180	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	12	. . . . .	. . . . .
The Little Anna Ditch . . . . .	.50	135	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .	. . . . .
The Fehling Ditch . . . . .	1	160	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	8	. . . . .	. . . . .
The Boots & Hinton Ditch . . . . .	1.50	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	25	. . . . .	. . . . .
The Ouray Ditch . . . . .	5	180	. . . . .	. . . . .	28	21	. . . . .	17	. . . . .	. . . . .

The Pancost Ditch . . . . .	3	150								25
The Half Moon Ditch . . . . .	2	75								
The Thompson & O'Donnell Ditch . . . . .	2	180						245	40	
The Owens Ditch . . . . .	.50	150								15
The Up Hill Ditch . . . . .	.50	120							40	25
The El Campus Ditch . . . . .	.									30
The Murphy Ditch . . . . .	2.50	120								
The Anderson Ditch . . . . .	3.50	150						6		55
The Bowen Ditch . . . . .	6	120			250					29
The Eastman Ditch . . . . .	.75	120								15
The Anderson Ditch . . . . .	3	150								15
The Johnson Ditch . . . . .	3	150								35
The Lippard Ditch . . . . .	.									
The Kraft Ditch . . . . .	3	120								62
The Murray Ditch . . . . .	2.50	90								5
The Salida Ditch . . . . .	8	210					55			5
The Steel & Contawine Ditch . . . . .	4	180								150
The Mayhall Ditch . . . . .	3	120						2		55
The Michigan Ditch . . . . .	1	150					7			12
† The State Reformatory Ditch . . . . .	1.50									
The Fish and Newcomb Ditch . . . . .	1	120								15

\* Not used this season.

† Not in use this season.

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa from	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Hayden Ditches Nos. 1, 2, 3 and 4 . . . . .	5.25	75	. . . . .	. . . . .	. . . . .	80	700	90	. . . . .	. . . . .
The Dairy Ditches Nos. 1 and 2 . . . . .	7	75	. . . . .	. . . . .	. . . . .	. . . . .	250	. . . . .	. . . . .	. . . . .
The Parsons Ditches Nos. 1 and 2 . . . . .	2	75	. . . . .	. . . . .	. . . . .	. . . . .	200	. . . . .	. . . . .	. . . . .
The Hugh Young Ditch . . . . .	2	90	. . . . .	. . . . .	. . . . .	200	80	100	. . . . .	. . . . .
The Resha McDermet & Hall Ditch . . . . .	3	90	. . . . .	. . . . .	. . . . .	275	125	. . . . .	. . . . .	. . . . .
The Paddock Ditches Nos. 1 and 2. . . . .	1	90	. . . . .	. . . . .	. . . . .	37	. . . . .	55	. . . . .	. . . . .
The Henderson & Dunlap Ditch . . . . .	2	60	. . . . .	. . . . .	. . . . .	100	. . . . .	. . . . .	. . . . .	. . . . .
The Star & Staley Ditch . . . . .	2	60	. . . . .	. . . . .	. . . . .	200	. . . . .	. . . . .	. . . . .	. . . . .
The Rock Creek Ditch . . . . .	.50	60	. . . . .	. . . . .	. . . . .	. . . . .	75	. . . . .	. . . . .	. . . . .
The Alex. De Lap Ditch . . . . .	1.50	75	. . . . .	. . . . .	. . . . .	40	10	. . . . .	. . . . .	. . . . .
The Gale Ditch . . . . .	.50	45	. . . . .	. . . . .	. . . . .	15	10	. . . . .	. . . . .	. . . . .
The Howard & Welch Ditch . . . . .	2	30	. . . . .	. . . . .	. . . . .	150	415	. . . . .	. . . . .	. . . . .
The Brantano Ditch . . . . .	.25	95	. . . . .	. . . . .	. . . . .	30	150	. . . . .	. . . . .	. . . . .
The Bochadey Ditch . . . . .	.50	60	. . . . .	. . . . .	. . . . .	. . . . .	60	. . . . .	. . . . .	. . . . .

Ditch	Acreage	Value per acre	Total value	No. of owners	% owned by residents
The St. Kivan Ditch . . . . .	60	.75	45.00	100	100
The De Mary Ditch . . . . .	20	.50	10.00	50	50
The Foster Ditch . . . . .	20	.20	4.00	20	20
The Holtzer Ditch . . . . .	60	.25	15.00	10	10
The Steavans and Little Placer Ditch . . . . .	60	.50	30.00	5	5
The France Ditch . . . . .	60	.75	45.00	25	25
The Stalky Ditch . . . . .	60	.75	45.00	35	35
The Dexter Ditch . . . . .	45	.50	22.50	50	50
The Sproat Ditch . . . . .	60	.25	15.00	8	8
The Eggleston Ditches Nos. 1 and 2 . . . . .	180	.50	90.00	27	27
The Stagner Ditch . . . . .	150	.75	112.50	10	10
The Pritchard Ditch . . . . .	150	1	150.00	10	10
The Fletcher Ditch . . . . .	195	.50	97.50	15	15
The Four Weeks Ditch . . . . .	60	.75	45.00	100	50
Totals in district . . . . .	301.25		1,382	2,739	4,172
				7,933	485
					16,765

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 11, GIVING THE DATE AND ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE FOURTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE, AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH, CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per sec. and decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per sec. appropriated in district	Order of priority in district
The Trout Creek Ditch.	Trout creek	Nov. 28, 1864	3.20	.	.	1
The Leeseamegh Ditch	Cottonwood creek	Nov. 30, 1864	4	.	3.20	2
The Thompson Ditch	Cottonwood creek	Dec. 19, 1864	4	.	7.20	3
The Gilliland Ditch No. 1	Brown's creek	Sept. 30, 1865	1	.	11.20	4
The Smith Ditch No. 1.	Brown's creek	Sept. 30, 1865	.60	.	12.20	5
The Three Mile Ditch	Three Mile creek	Nov. 30, 1865	.60	.60	12.80	6
The Harrington Ditch	South Arkansas river	Mar. 10, 1866	3.24	3.24	13.40	7
The Tenassee Ditch	South Arkansas river	April 30, 1866	5.40	.	16.64	8
The Prior Right Ditch	Cottonwood creek	April 30, 1866	2	.	22.04	9
The Mahan Ditch	Cottonwood creek	April 30, 1866	1	.	24.04	10
The Evans Ditch	Brown's creek	April 30, 1866	3.20	.	25.04	11

The McFarland Ditch . . . . .	Three Mile creek	April	30, 1866	.40	. . . . .	28.24	12
The Pioneer Ditch . . . . .	Brown's creek . . . . .	May	17, 1865	6.58	6.58	28.64	13
The Gorrell Ditch. . . . .	North Cottonwood creek. . . . .	May	31, 1866	4	. . . . .	35.22	14
The Cottonwood Irrigating Ditch . . . . .	Cottonwood creek . . . . .	July	31, 1866	6	. . . . .	39.22	15
The Burnett Ditch . . . . .	South Arkansas river . . . . .	Dec.	31, 1866	3.90	. . . . .	45.22	16
The Boon Ditch No. 1 . . . . .	South Arkansas river . . . . .	May	1, 1867	1.60	. . . . .	49.12	17
The Chalk Creek Mill Ditch. . . . .	Chalk creek . . . . .	May	31, 1867	16	. . . . .	50.72	18
The Noland Ditch . . . . .	South Arkansas river . . . . .	Nov.	16, 1867	3.60	. . . . .	66.72	19
The Bray Ditch. . . . .	North Cottonwood creek. . . . .	Dec.	31, 1867	3.20	. . . . .	70.32	20
The Gilliland Ditch No. 2 . . . . .	Brown's creek . . . . .	Dec.	31, 1867	.86	. . . . .	73.52	21
The Harrington Ditch, second appropriation . . . . .	South Arkansas river . . . . .	Jan.	2, 1868	2.14	5.38	74.38	22
The Cameron Ditch . . . . .	N. fork of So. Arkansas river . . . . .	Jan.	10, 1868	9	. . . . .	76.52	23
The Smith Ditch No. 2. . . . .	Brown's creek . . . . .	April	30, 1868	2.60	. . . . .	85.52	24
The Ehrhart and Bertschy Ditch . . . . .	Brown's creek . . . . .	May	10, 1868	6.40	. . . . .	88.12	25
The Pioneer Ditch, second appropriation . . . . .	Brown's creek . . . . .	May	31, 1868	1.31	7.89	94.52	26
The Three Mile Ditch, second appropriation . . . . .	Three Mile creek. . . . .	Dec	31, 1868	2.60	3.20	95.83	27
The McPherson Ditch . . . . .	South Arkansas river . . . . .	April	30, 1869	1	. . . . .	98.43	28
The Mundlein Ditch No. 1. . . . .	South Arkansas river . . . . .	Nov.	30, 1869	1.80	. . . . .	99.43	29
The Nash Ditch . . . . .	Brown's creek . . . . .	Dec.	31, 1869	.80	. . . . .	101.23	30
The Huntzicker Ditch . . . . .	Cochetopa creek . . . . .	Dec.	31, 1870	.70	. . . . .	102.03	31
The Green Gulch Ditch . . . . .	Green Gulch creek. . . . .	Nov.	30, 1871	1	. . . . .	102.73	32
The Boon Ditch No. 2 . . . . .	Pass creek . . . . .	Nov.	30, 1871	1.40	. . . . .	103.73	33



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, OR CANAL.	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet previously appropriated in district	Order of priority in district
The Empire Creek Ditch . . . . .	Empire creek . . . . .	Dec. 31, 1871	6.40	. . . . .	105.13	34
The Maxwell Ditch. . . . .	C-chetopa creek. . . . .	Dec. 31, 1871	.80	. . . . .	111.53	35
The Huey Ditch No. 1 . . . . .	Dry creek . . . . .	April 30, 1872	1.20	. . . . .	112.33	36
The Huey Ditch No. 2 . . . . .	Dry creek . . . . .	April 30, 1872	1.20	. . . . .	113.53	37
The White Ditch No. 2 . . . . .	South Arkansas river . . . . .	May 1, 1872	1.60	. . . . .	114.73	38
The White Ditch No. 3 . . . . .	South Arkansas river . . . . .	Not definite	1.60	. . . . .	116.33	
The Trout Creek Company's Ditch . . . . .	Cottonwood creek . . . . .	Dec. 17, 1872	20	. . . . .	117.93	39
The Ronk Ditch . . . . .	North Cottonwood creek . . . . .	Dec. 31, 1872	2	. . . . .	137.93	40
The Froelick Ditch . . . . .	Buffalo creek. . . . .	Dec. 31, 1872	.20	. . . . .	139.93	41
The Gilliland Ditch No. 3 . . . . .	Brown's creek . . . . .	Dec. 31, 1872	2.21	. . . . .	140.13	42
The Cottonwood Irrigation Ditch, second appropriation . . . . .	Cottonwood creek . . . . .	Dec. 31, 1872	13	19	142.34	43
The Mundlein Ditch No. 2 . . . . .	Green Gulch creek. . . . .	March 1, 1873	1.74	. . . . .	155.34	44
The Harrington Ditch, third appropriation. . . . .	South Arkansas river . . . . .	May 31, 1873	.62	6	157.08	45
The White Ditch . . . . .	South Arkansas river . . . . .	May 31, 1873	1.60	. . . . .	157.70	46
The Spaulding Ditch . . . . .	Squaw creek . . . . .	Dec. 31, 1873	.60	. . . . .	159.30	47

The Weber Ditch No. 1 . . . . .	Three Mile creek . . . . .	Dec. 31, 1873	.40	. . . . .	159.90	48
The Hensie Ditch No. 1 . . . . .	Cochetopa creek . . . . .	Dec. 31, 1873	.30	. . . . .	160.30	49
The Hensie Ditch No. 2 . . . . .	Pass creek . . . . .	Dec. 31, 1873	.20	. . . . .	160.60	50
The White Ditch No. 1 . . . . .	South Arkansas river . . . . .	May 1, 1874	4	. . . . .	160.80	51
The Supply Ditch . . . . .	Cottonwood creek . . . . .	May 12, 1874	3.20	. . . . .	164.80	52
The Cottonwood and Maxwell Creek Ditch . . . . .	Cottonwood creek . . . . .	May 31, 1874	13	. . . . .	168	53
The Morrison Creek Ditch . . . . .	Morrison creek . . . . .	August 31, 1874	3.20	. . . . .	181	54
The Hill and Sprague Ditch . . . . .	South Arkansas river . . . . .	Jan. 22, 1875	6.40	. . . . .	184.20	55
The McGee Ditch . . . . .	Trout creek . . . . .	April 30, 1875	.14	. . . . .	190.60	56
The Four Mile Ditch . . . . .	Four Mile creek . . . . .	May 31, 1875	3.20	. . . . .	190.74	57
The Williams and Haun Ditch . . . . .	Arkansas river . . . . .	Dec. 31, 1875	16	. . . . .	193.94	58
The Frantz Ditch . . . . .	Chalk creek . . . . .	Dec. 31, 1875	6.40	. . . . .	209.94	59
The Briscoe Ditch . . . . .	South Arkansas river . . . . .	Nov. 18, 1876	1.80	. . . . .	216.34	60
The McPherson and Burnett Ditch . . . . .	South Arkansas river . . . . .	Nov. 30, 1876	2	. . . . .	218.14	61
The White Ditch No. 2, second appropriation . . . . .	South Arkansas river . . . . .	March 31, 1877	1	. . . . .	220.14	62
The White Ditch No. 3, second appropriation . . . . .	South Arkansas river . . . . .	March 31, 1877	1.60	. . . . .	221.14	
The Wolf and Neerland Ditch . . . . .	Cottonwood creek . . . . .	April 1, 1877	8.14	. . . . .	222.74	63
The Williams Ditch . . . . .	Arkansas river . . . . .	April 30, 1877	1	. . . . .	230.88	64
The Hutchinson Ditch . . . . .	South Arkansas river . . . . .	May 31, 1877	3	. . . . .	231.88	65
The Rhoades Ditch . . . . .	Trout creek . . . . .	June 30, 1878	.20	. . . . .	234.88	66
The Weber Ditch No. 2 . . . . .	Three Mile creek . . . . .	June 30, 1878	3.20	. . . . .	235.08	67
The Tennessee Ditch, second appropriation . . . . .	South Arkansas river . . . . .	Dec. 31, 1878	2.40	7.80	238.28	68

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second de-priority	Summation of de-creees to each reservoir	Cubic feet per second previously appropriated in district	Order of priority in district
The Edwards Ditch No. 1 . . . . .	N. Fork of So. Arkansas river . . . . .	Mar. 31, 1879	.10	. . . . .	240.68	69
The Hutchinson Ditch No. 2 . . . . .	South Arkansas river . . . . .	May 31, 1879	1	. . . . .	240.78	70
The McKenna Ditch . . . . .	North Cottonwood creek . . . . .	May 31, 1879	6.40	. . . . .	241.78	71
The Champ Ditch . . . . .	South Arkansas river . . . . .	April 1, 1880	1.60	. . . . .	248.18	72
The Dickman Ditch No. 1 . . . . .	Bear creek . . . . .	April 30, 1880	.60	. . . . .	249.78	73
The Dickman Ditch No. 2 . . . . .	Bear creek . . . . .	April 30, 1880	.60	. . . . .	250.38	74
The Brisco Ditch, second appropriation . . . . .	South Arkansas river . . . . .	April 30, 1880	2	3.80	250.98	75
The Arkansas Valley Irrigation Canal Company's Ditch . . . . .	Cottonwood creek . . . . .	May 1, 1880	18.05	. . . . .	252.98	76
The Sand Creek Ditch . . . . .	Sand creek . . . . .	May 31, 1880	.60	. . . . .	271.03	77
The Hot Creek Ditch . . . . .	Hot creek . . . . .	June 1, 1880	.61	. . . . .	271.63	78
The South Arkansas Waterworks and Irrigation Co.'s Ditch . . . . .	South Arkansas river . . . . .	July 17, 1880	8	. . . . .	272.74	78½
The Laughoff Ditch . . . . .	Arkansas river . . . . .	Sept. 8, 1880*	4.80	. . . . .	280.24	79
The Missouri Park Ditch and Extension . . . . .	South Arkansas river . . . . .	Nov. 15, 1880	10	. . . . .	285.04	80
The Abbott Placer Ditch . . . . .	Willow creek . . . . .	Mar. 10, 1881	2	. . . . .	295.04	81
The Paine Ditch . . . . .	South Arkansas river . . . . .	Mar. 15, 1881	.80	. . . . .	297.04	82

The Poncha Springs Acequia Ditch . . . . .	Mar.	23, 1881	5.82	. . . . .	297.84	83
The Willow Dale Ditch . . . . .	Mar.	30, 1881	3.30	. . . . .	303.66	84
The Del Monte Irrigating Ditch . . . . .	Mar.	31, 1881	7.20	. . . . .	306.96	85
The Willow Creek Ditch . . . . .	April	15, 1881	1.60	. . . . .	314.16	86
The Siles Ditch No. 1 . . . . .	April	30, 1881	.80	. . . . .	315.76	87
The Edwards Ditch No. 2, . . . . .	May	1, 1881	.22	. . . . .	316.56	88
The Upper Ditch . . . . .	May	7, 1881	4.80	. . . . .	316.78	89
The Mitchell Ditches Nos. 1, 2, 3 and 4 . . . . .	May	31, 1881	1.30	. . . . .	321.58	90
The Briscoe Ditch, third appropriation . . . . .	May	31, 1881	2.20	6	322.88	91
The Noland Ditch, second appropriation . . . . .	May	31, 1881	2.40	6	325.08	92
The Harmony Ditch . . . . .	June	30, 1881	1	. . . . .	327.48	93
The Five-Mile Ditch . . . . .	Nov.	30, 1881	.20	. . . . .	328.48	94
The Abbott Placer Ditch, second appropriation . . . . .	Nov.	30, 1881	1	3	328.68	95
The McFadden Ditch. . . . .	Jan.	9, 1882	3.20	. . . . .	329.68	96
The Spring Ditch . . . . .	Jan.	31, 1882	1	. . . . .	332.88	97
The Riverside Ditch and Allen Extension . . . . .	Feb.	22, 1882	1	. . . . .	333.88	98
The Helena Ditch. . . . .	March	1, 1882	1	. . . . .	334.88	99
The McPhelimy Ditch . . . . .	March	1, 1882	1	. . . . .	335.88	100
The North Fork Ditch . . . . .	March	13, 1882	18.60	. . . . .	336.88	101
The Niles Brothers Ditch . . . . .	March	23, 1882	2.40	. . . . .	355.48	102
The Wolf & Neerland Ditch, second appropriation . . . . .	March	30, 1882	1	9.14	357.88	103
The Richardson, Nelson & Wilnot Ditch . . . . .	April	10, 1882	1	. . . . .	358.88	104

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL, OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second appropriated in district	Order of priority in district
The Isaac W. Edwards Ditch . . . . .	North Fork So. Arkansas river	April 11, 1882	.50	. . . . .	359.88	105
The Missouri Park Ditch and Extension, second appropriation	South Arkansas river . . . . .	April 15, 1882	30	40	360.38	106
The Edwards Ditch No. 2, second appropriation . . . . .	North Fork So. Arkansas river	April 15, 1882	.68	.90	390.38	107
The Edwards Ditch No. 1, second appropriation . . . . .	North Fork So. Arkansas river	April 15, 1882	.30	. . . . .	391.06	108
The Abbott & Loper Ditch . . . . .	Half-moon creek . . . . .	April 25, 1882	1	. . . . .	391.36	109
The Sites Ditch No. 2 . . . . .	Little Willow creek . . . . .	April 30, 1882	1.60	. . . . .	392.36	110
The Midway Ditch . . . . .	Maxwell creek . . . . .	May 1, 1882	1	. . . . .	393.96	111
The Six Mile Ditch . . . . .	Trout creek . . . . .	May 31, 1882	.13	. . . . .	394.96	112
The Briscoe Ditch, fourth appropriation . . . . .	South Arkansas river . . . . .	May 31, 1882	5.40	. . . . .	395.09	113
The Charlton Ditch . . . . .	Jones gulch . . . . .	June 7, 1882	8	. . . . .	400.49	114
The Bartholemew Ditch . . . . .	Frenchman creek . . . . .	June 30, 1882	1	. . . . .	408.49	115
The Bray Ditch . . . . .	North Cottonwood creek . . . . .	Sept. 28, 1882	3.20	. . . . .	409.49	116
The Gordon Ditch . . . . .	Three Mile creek . . . . .	Sept. 30, 1882	1	. . . . .	412.69	117
The Dry Field Ditch . . . . .	Arkansas river . . . . .	Oct. 23, 1882	6.20	. . . . .	413.69	118
	South Arkansas river . . . . .	Nov. 15, 1882	1	. . . . .	419.89	119



The Lowland Ditch . . . . .	Nov.	30, 1882	1	. . . . .	420.89	120
The Pinon Ditch . . . . .	Nov.	30, 1882	1	. . . . .	421.89	121
The Owens Ditch . . . . .	Nov.	30, 1882	1	. . . . .	422.89	122
The Mndlein Ditch No. 1, second appropriation . . . . .	Dec.	31, 1882	.60	2.40	423.89	123
The Edwards Ditch No. 1, third appropriation . . . . .	Jan.	1, 1883	.40	.80	424.49	124
The Shamrock Ditch . . . . .	Feb.	21, 1883	1	. . . . .	424.89	125
The Hogue Ditch . . . . .	March	10, 1883	1	. . . . .	425.89	126
The Eureka Ditch . . . . .	March	26, 1883	1.80	. . . . .	426.89	127
The Spring Creek Ditch . . . . .	April	12, 1883	1	. . . . .	428.69	128
The Lowland Ditch, second appropriation . . . . .	April	19, 1883	5.60	6.60	429.69	129
The Del Monte Irrigating Ditch No. 2 . . . . .	April	30, 1883	1	. . . . .	435.29	130
The Rosedale Ditch . . . . .	May	29, 1883	.10	. . . . .	436.29	131
The Hoosier Ditch . . . . .	May	31, 1883	3.48	. . . . .	436.39	132
The Noland Ditch, third appropriation . . . . .	May	31, 1883	.33	5	439.87	133
The High Ditch . . . . .	May	31, 1883	1	. . . . .	440.20	134
The Riverside Ditch and Allen Extension, second appropriat'n	Aug.	9, 1883	9	. . . . .	441.20	135
The Bartholemew Ditch, second appropriation . . . . .	Sept.	24, 1883	3	. . . . .	450.20	136
The Rhoades North Side Ditch . . . . .	April	13, 1884	.20	. . . . .	453.20	137
The Hogue Ditch, second appropriation . . . . .	Nov.	1, 1884	1	. . . . .	453.40	138
The Wolf & Neerland Ditch, third appropriation . . . . .	Dec.	31, 1884	1	. . . . .	454.40	139
The Green Gulch Ditch, second appropriation . . . . .	Dec.	31, 1884	1	2	455.40	140
The Wolf & Neerland Ditch, fourth appropriation . . . . .	March	1, 1885	1	11.40	456.40	141



## STATEMENT CONCERNING DITCHES--Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	Order of priority in district
The Ahern Ditch . . . . .	Squaw creek . . . . .	April 20, 1885	1	. . . . .	457.40	142
The Silver Creek Ditch . . . . .	North Cottonwood creek . . . . .	July 25, 1885	6.40	. . . . .	458.40	143
The Ahern Ditch, second appropriation . . . . .	Squaw creek . . . . .	Sept. 4, 1885	2.20	3.20	464.80	144
The Harvard Ditch . . . . .	Three-Mile creek . . . . .	Sept. 21, 1885	1	. . . . .	467	145
The Mountain Ditch . . . . .	Three-Mile creek . . . . .	Oct. 1, 1885	1	. . . . .	468	146
The Link and Irving Irrigating Ditch . . . . .	Chalk creek . . . . .	Dec. 1, 1885	15.20	. . . . .	469	147
The Spring Ditch, second appropriation . . . . .	Morris creek . . . . .	Jan. 8, 1886	1	. . . . .	484.20	148
The McGee Ditch, second appropriation . . . . .	Trout creek . . . . .	April 30, 1886	.16	.30	485.20	149
The Piñon Cañon Ditch . . . . .	Piñon Cañon creek . . . . .	Sept. 1, 1886	1	. . . . .	485.36	150
The Little Anna Ditch . . . . .	Frenchman creek . . . . .	Sept. 16, 1886	1	. . . . .	486.36	151
The Newby and Bowring Ditch, fourth appropriation . . . . .	South Arkansas river . . . . .	Aug. 4, 1886	7	9.33	487.36	152
The Helena Ditch, second appropriation . . . . .	Arkansas river . . . . .	Nov. 27, 1886	19	20	494.36	153
The Fehling Ditch . . . . .	Cottonwood creek . . . . .	Dec. 31, 1886	1	. . . . .	513.36	154
The Del Monte Irrigating Ditch No. 2, second appropriation . . . . .	Little Cottonwood creek . . . . .	Jan. 8, 1887	.20	1.20	514.36	155
The Boots and Hinton Ditch . . . . .	South Arkansas river . . . . .	Mar. 15, 1887	1	. . . . .	514.56	156

The Ouray Ditch . . . . .	South Arkansas river . . . . .	Mar.	31, 1887	1	. . . . .	\$15.56	157
The Gordon Ditch, second appropriation . . . . .	Three-Mile creek . . . . .	April	19, 1887	1	2	\$16.56	158
The Abbott and Loper Ditch, second appropriation . . . . .	Half-Moon creek . . . . .	May	7, 1887	5.40	6.40	\$17.56	159
The Paucost Ditch . . . . .	North Cottonwood creek . . . . .	May	10, 1887	2.80	. . . . .	\$22.96	160
The Half-Moon Ditch . . . . .	Half Moon creek . . . . .	May	28, 1887	.30	. . . . .	\$25.76	161
The Thompson and O'Donnell Ditch . . . . .	Chalk creek . . . . .	June	17, 1887	1	. . . . .	\$26.06	162
The Owens Ditch . . . . .	Dry creek . . . . .	July	12, 1887	3.20	. . . . .	\$27.06	163
The Up-Hill Ditch . . . . .	North Cottonwood creek . . . . .	July	16, 1887	2.40	. . . . .	\$30.26	164
The Mountain Ditch, second appropriation . . . . .	Three-Mile creek . . . . .	Aug.	25, 1887	1.44	2.44	\$32.66	165
The El Campus Ditch . . . . .	A gulch stream . . . . .	Mar.	31, 1888	1	. . . . .	\$34.10	166
The Murphy Ditch . . . . .	Cochitopa creek . . . . .	May	1, 1888	1	. . . . .	\$35.10	167
The Harvard Ditch, second appropriation . . . . .	Three-Mile creek . . . . .	May	2, 1888	2.20	3.20	\$36.10	168
The Anderson Ditch . . . . .	Pine creek . . . . .	June	1, 1888	1	. . . . .	\$38.30	169
The Hogue Ditch, thlrld appropriation . . . . .	South Arkansas river . . . . .	June	1, 1888	2.30	4.30	\$39.30	170
The Riverside Ditch and Allen Extension, third appropriat'n . . . . .	Arkansas river . . . . .	July	6, 1888	16	26	\$41.60	171
The El Campus Ditch, second appropriation . . . . .	A gulch stream . . . . .	July	8, 1888	2.20	3.20	\$57.60	172
The Bowen Ditch . . . . .	Chalk creek . . . . .	Sept.	24, 1888	50.90	. . . . .	\$59.80	173
The Eastman Ditch . . . . .	Frenchman creek . . . . .	Nov.	26, 1888	15.20	. . . . .	\$10.70	174
The Hoosier Ditch, second appropriation . . . . .	North Fork So Arkansas river . . . . .	Nov.	30, 1888	1	. . . . .	\$25.90	175
The Anderson Irrigating Ditch . . . . .	Chalk creek . . . . .	Mar.	1, 1889	1.50	. . . . .	\$26.90	176
The Little Anna Ditch, second appropriation . . . . .	Frenchman creek . . . . .	April	9, 1889	2.20	3.20	\$28.40	177
The Ouray Ditch, second appropriation . . . . .	South Arkansas river . . . . .	May	31, 1889	3.20	. . . . .	\$30.60	178

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH, OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each reservoir	Cubic feet per second appropriated in district	Order of priority in district
The Ouray Ditch, third appropriation . . . . .	South Arkansas river . . . . .	June 4, 1889	9	13.20	633.80	179
The Johnson Ditch . . . . .	Cottonwood creek . . . . .	July 12, 1889	1	. . . . .	642.80	180
The Murphy Ditch, second appropriation . . . . .	Cochetopa creek . . . . .	August 12, 1889	3.80	4.80	643.80	181
The Spring Creek Ditch, second appropriation . . . . .	Spring creek . . . . .	August 13, 1889	.05	1.05	647.60	182
The Hoosier Ditch, third appropriation . . . . .	North fork So. Arkansas river	Sept. 7, 1889	8.32	12.80	647.65	183
The Anderson Ditch, second appropriation . . . . .	Pine creek . . . . .	Sept. 30, 1889	3.80	4.80	655.97	184
The High Ditch, second appropriation . . . . .	North fork So. Arkansas river	Nov. 21, 1889	1	2	659.77	185
The Lippard Enlargement of the South Arkansas Water Works and Irrigation Company's Ditch	South Arkansas river . . . . .	Nov. 27, 1889	1.60	. . . . .	660.77	186
The Piñon Cañon Ditch, second appropriation . . . . .	Piñon Cañon creek . . . . .	Dec. 21, 1889	.70	1.70	662.37	187
The Piñon Ditch, second appropriation . . . . .	South Arkansas river . . . . .	Dec. 31, 1889	1	2	663.07	188
The Johnson Ditch, second appropriation . . . . .	Cottonwood creek . . . . .	March 11, 1890	1.60	2.60	664.07	189
The Harmony Ditch, second appropriation . . . . .	Arkansas river . . . . .	April 15, 1890	7	8	665.67	190
Total in district . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	672.67	

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 11, GIVING THE DATE, ORDER OF PRIORITY AND AMOUNT OF EACH APPROPRIATION FOR THE RESERVOIRS IN SAID DISTRICT, AS THE SAME HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE FOURTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF RESERVOIR	Stream from which water is taken	Name of ditch leading water thereto	Date of appropriation	Cubic feet of water per second decreed to each priority	Cubic feet per second previously appropriated in district	Order of priority in district
The Donnell Reservoir No. 1 (Boss Lake) . . . . .	Boss Lake drainage . . . . .	Feeder . . .	July 19, 1889	Not given	. . .	1
The Donnell Reservoir No. 2 . . . . .	Lake Fork . . . . .	Feeder . . .	July 19, 1889	4,704,480	. . .	2

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 11, RELATIVE TO WHICH PLATS AND STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT.
The Huggins and Van Every Ditch	South Arkansas . .	Jan. 11, 1889	Dec. 26, 1888	7	Geo. S. Huggins and William Van Every
The Everett Ditch No. 1 . . . .	Harrington gulch .	Feb. 4, 1889	Jan. 29, 1889	3.50	P. C. Everett
The Eggleston Ditch No. 1 . . . .	Springs . . . . .	Feb. 5, 1889	April 20, 1885	1	W. K. Eggleston
The Eggleston Ditch No. 2 . . . .	Waste water . . . .	Feb. 5, 1889	May 14, 1887	2	W. K. Eggleston
The Kennedy Ditch . . . . .	Long gulch . . . . .	Feb. 7, 1889	Dec. 17, 1888	5.50	O. J. Kennedy
The Collins Ditch . . . . .	North Cottonwood .	Feb. 13, 1889	Sept. 3, 1888	10	Jas. E. Wilkerson
The Criswell Ditch . . . . .	Maxwell creek . . .	July 11, 1889	April 24, 1888	2	Geo. W. Criswell
The Bray and Mahon Ditch . . . .	Cottonwood creek .	July 11, 1889	June 10, 1889	4.50	Hugh Mahon and Josiah T. Bray
The Buena Vista Ditch . . . . .	Cottonwood creek .	July 18, 1889	Mar. 20, 1889	11.75	Francis McPhelimy
The Evans Ditch . . . . .	S. Fork Cottonwood .	July 30, 1889	May 6, 1889	56	John G. Evans
The Mrs. Champ Ditch . . . . .	Pass creek . . . . .	Aug. 29, 1889	May 22, 1888	3	Mabel H. Champ
The Hepner Ditch . . . . .	Empire creek . . .	Nov. 6, 1889	May 18, 1884	3	Mark Hepner
The Newcomb Ditch . . . . .	Spring creek . . .	Nov. 2, 1889	May, 1887	3.70	C. H. Newcomb
The Michigan Ditch enlargement	Cottonwood creek .	Nov. 30, 1889	Feb. 15, 1889	8.50	Chas. C. Bockhouse and John J. Wilbur
The Vickers Ditch . . . . .	Schindler's gulch .	Jan. 13, 1890	April 1, 1884	3	Thomas Vickers

The Riverside Ditch, enlargement of the extension and the second extension of . . . }	Arkansas river . .	Jan. 13, 1890	June, 1888	66	. . . . . H. Julian Allen <i>et al</i>
	Arkansas river . .	Feb. 7, 1890	Dec. 16, 1889	240	. . . . . H. Julian Allen <i>et al</i>
The High Line Supply Ditch . .	S. Arkansas river .	Feb. 17, 1890	Feb. 5, 1890	1.50	. . . . . Nahum Swallows
The Swallows Ditch . . . . .	Chalk creek . . . .	Feb. 17, 1890	May 1, 1883	5	. . . . . Joseph W. Taylor <i>et al</i>
The Walker Ditch . . . . .	Clear creek . . . .	Feb. 17, 1890	Nov. 13, 1889	13	. . . . . Chris. Kirsch
The Kirsch Ditch . . . . .	Bear creek . . . . .	Mar. 12, 1890	Oct. 14, 1889	4.52	. . Max Dickmann and Mrs. Carrie Englebright
The Park Ditch . . . . .	Cottonwood creek .	Mar. 17, 1890	Mar. 26, 1887	2.50	. . . . . Bernard Pos
The Pos Ditch . . . . .	Long gulch . . . . .	April 5, 1890	Jan. 30, 1890	1	. . . . . Mary L. Overholt
The Rock Cliff Ditch . . . . .	Arkansas river . .	April 7, 1890	March, 1882	20	. . . . . P. M. Weston <i>et al</i>
The Helena Ditch . . . . .	Arkansas river . .	April 7, 1890	June, 1881	15	. . . . . J. H. Lewis <i>et al</i>
The Harmony Ditch . . . . .	Cottonwood creek .	May 9, 1890	April 3, 1880	10.62	. . . . . Francis McPhelmy
The Tip Top Ditch . . . . .	Three Mile creek .	Aug. 11, 1890	July 21, 1890	5	. . . . . George W. Berrian
The Last Chance Ditch . . . . .	Cochetope creek . .	Sept. 18, 1890	1882	3.50	. . . . . Hilry G. Henderson
The Henderson Ditch . . . . .	S. Arkansas river .	Oct. 17, 1890	Prior to 1881	11.50	. . . . . O. E. Harrington
The Harrington Ditch . . . . .					



## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 11, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Cottonwood Lake Reservoir	{ South fork Cotton-wood creek } Arkansas river . . . . .	On the stream . . . . .	July 30, 1889	May 6, 1889	6,294,048	. . . . . John G. Evans
The Allen's Lake or Reservoir		Riverside Ditch . . . . .	. . . . .	. . . . .	9,424,800	. . . . .
The Allen Reservoir No. 1 . . . . .	{ Rain and flood } waters . . . . .	. . . . .	Jan. 13, 1890	June, 1888	720,000	{ H Julian Allen and J. U. Gabathuler }
The Allen Reservoir No. 2 . . . . .		Extensions . . . . .	. . . . .	. . . . .	4,712,000	
The Poncha Reservoir . . . . .	Poncha creek . . . . .	Feeder . . . . .	Jan. 28, 1890	Nov. 9, 1889	223,887.6	. . . . . Louis R. Ehrich

*Water District No. 12*—James T. Locke, Commissioner, Cañon City.

Mr. Locke reports for the year 1890, 47 ditches taking water, an aggregate length of ditches of 85 miles, 1,292 acres in alfalfa, 110 acres in seeded grasses, 480 acres in natural grasses, and 2,268 acres in other crops; also, 170 acres irrigated from seepage.

## COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION No. 2—DISTRICT No. 12.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Greene Ditch . . . . .	.25	* 60	* 2	* 40	* 20	. . . . .	. . . . .	* 20	. . . . .	. . . . .
The Titworth Ditch . . . . .	* 2	* 90	* 2	* 119	* 100	. . . . .	. . . . .	* 20	. . . . .	. . . . .
The Craig & Beckham Ditch . . . . .	* 1.50	60	1	69	3	. . . . .	. . . . .	66	. . . . .	. . . . .
The Wafford Ditch . . . . .	1	69	2	110	* 75	. . . . .	. . . . .	35	. . . . .	. . . . .
The Obrine Ditch . . . . .	1	40	2	54	30	. . . . .	. . . . .	24	. . . . .	. . . . .
The Cottage Rock Ditch. . . . .	1	* 30	1	28	20	. . . . .	. . . . .	8	. . . . .	. . . . .
The Garden Park Ditch. . . . .	2	30	2	116.50	90	. . . . .	. . . . .	* 26.50	. . . . .	. . . . .
The Terry Ditch. . . . .	1	10	1	6	6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Anon Ripley Ditch . . . . .	1	5	1	15	15	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Adams Ditch . . . . .	1	15	2	18	* 18	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Howard Ditch . . . . .	2	5	.25	20	. . . . .	. . . . .	10	* 10	. . . . .	. . . . .
The Mascott Ditch . . . . .	.25	* 10	2	40	. . . . .	. . . . .	* 40	. . . . .	5	. . . . .
The First Leon Ditch . . . . .	.50	15	* 2	40	. . . . .	. . . . .	40	. . . . .	10	. . . . .

The George Ditch . . . . .	1					70			5	30	35			
The Doris Ditch, . . . . .	2	20	2			60			10	15	*	35	10	
The Kitridge Ditch No. 2 . . . . .	2					100				50		50		
The Tremayne Bros. Ditch No. 2 . . . . .	1					50			20	30				
The McIntire Ditch . . . . .	1	30	.25			26			5	10		11		
The Murphy Ditch . . . . .	.25					8						8		
The Witcher Ditch No. 1 . . . . .	1	20	.25			40				20		20		
The Drury Ditch . . . . .	2	30	.25			30				10		20		
The Watson Ditch No. 1. . . . .	3	* 40	* 2			40			10	10		20		
The Paul's Ditch . . . . .	2					34			5	*	20	9		
The Tremayne Ditch No. 2 . . . . .	2					35				15		20		
The Witcher Ditch No. 2 . . . . .	1					20						20		
The Kitridge Ditch No. 2 . . . . .	2	20	2			125			10	75		40	25	
The Watson Ditch No. 2 . . . . .	3	* 20	2			60			10	35		15	10	
The Second Leon Ditch . . . . .	.50	15	2			35			15	20			8	
The First Barnard Ditch . . . . .	.25	5	*	.25		* 16			10	4.50		1.50	3	
The Kestle Ditch . . . . .	1	10	.50			30			5	10	*	15		
The Tremayne Ditch No. 3. . . . .	2	10	.50			10			5		*	5		
The Hardscrabble Ditch, . . . . .	2	* 120	1			* 75					*	35		
The Burroughs Ditch . . . . .	1	* 25	1			25						25		
The Coleman Ditch . . . . .	3	* 140	*	2.50		* 265				150		115		
The Harrington Ditch, . . . . .	5	* 60	2			* 200				120		80		

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Montreille Ditch . . . . .	2	90	* 1	* 90	20	.	.	70	.	.
The 1869 Ditch . . . . .	.50	28	* 1	* 30	30	.	.	.	.	.
The Reece Ditch . . . . .	2.50	60	1	* 200	40	.	.	160	.	.
The Cascade Ditch . . . . .	5	40	* 4	* 475	175	.	.	300	.	.
The Corforn Ditch . . . . .	3.50	28	* 1	* 35	35	.	.	.	.	.
The Percival Ditch . . . . .	4	30	1	* 80	.	.	.	80	.	.
The Draper Ditch . . . . .	4	45	1.25	150	100	.	.	50	.	.
The Melrose Ditch . . . . .	2	30	.50	125	.	.	.	.	.	.
The Vaughn Ditch . . . . .	3	30	2	317	† 100	.	.	217	.	.
The Allen Ditch . . . . .	2.50	30	1.50	145	* 75	.	.	70	.	.
The Wesliffeffer Ditch . . . . .	1.50	40	.50	24	.	.	.	24	.	.
The Sikes Cypert and Chatham Ditch .	2	30	2	219	* 30	.	.	189	.	.
Totals in district . . . . .	85	. . .	55.50	4,316	1,292	110	48	2,268	170	4,300

\* About.

† Probably.

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 12, GIVING THE DATE AND ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, SO FAR AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE THIRD JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each property	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Hardscrabble Ditch . . . . .	Hardscrabble creek . . .	May 1, 1860	.9375	. . . .	. . . .	1	1
The Conley Ditch . . . . .	Beaver creek . . .	Mar. 30, 1861	* 5.48	. . . .	. . . .	1	2
The Burdick Ditch . . . . .	Beaver creek . . . . .	Mar. 30, 1861	* 3.88	. . . .	. . . .	1	3
The Green Ditch . . . . .	Four Mile or Oil creek .	April 1, 1861	10	. . . .	. . . .	1	4
The Glendale Ditch . . . . .	Beaver creek . . . . .	April 15, 1861	6	. . . .	. . . .	2	5
The Stephen Frazier Ditch . . . . .	Beaver creek . . . . .	April 20, 1861	* 5.10	. . . .	. . . .	3	6
The Peggy Ditch . . . . .	Beaver creek . . . . .	May 20, 1861	* 17	. . . .	. . . .	4	7
The Callen Ditch . . . . .	Beaver creek . . . . .	May 30, 1861	2	. . . .	. . . .	5	8
The Bates Ditch . . . . .	Beaver creek . . . . .	May 31, 1861	* 4.55	. . . .	. . . .	6	9
The Titsworth Ditch . . . . .	Four-Mile creek . . . .	May 31, 1861	5	. . . .	. . . .	2	9a

\* Capacity as computed.



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet previously appropriated in district	No. on stream	Order of priority in district
The Craig-Beckham Ditch, through Titsworth Ditch before construction . . . . .	Four Mile . . . . .	May 31, 1862	12	. . . . .	. . . . .	3	10
The Tanazzi Ditch. . . . .	Hardscrabble . . . . .	Mar. 1, 1863	1	. . . . .	. . . . .	2	11
The Titsworth Ditch, first extension and enlargement. . . . .	Four Mile . . . . .	Mar. 31, 1863	12	17	. . . . .	4	12
The Balltiff Ditch . . . . .	Beaver . . . . .	Mar. 31, 1864	* 5.34	. . . . .	. . . . .	7	13
The Johnson Ditch . . . . .	Beaver . . . . .	May 20, 1864	* 1.62	. . . . .	. . . . .	8	14
The Craig-Beckham Ditch. . . . .	Four Mile . . . . .	Feb. 10, 1865	12	. . . . .	. . . . .	5	15
The Wafford Ditch . . . . .	Four Mile . . . . .	Mar. 1, 1865	20	. . . . .	. . . . .	6	16
The Titsworth Ditch, second extension. . . . .	Four Mile . . . . .	Mar. 31, 1865	As above	. . . . .	. . . . .	7	17
The Toof Ditch No. 1. . . . .	Beaver . . . . .	Mar. 31, 1865	* 3.36	. . . . .	. . . . .	9	17a
The Johnson Ditch, first enlargement. . . . .	Beaver . . . . .	April 1, 1865	* 14.58	. . . . .	. . . . .	10	18
The Johnson and Merit Ditch. . . . .	Beaver . . . . .	April 15, 1865	* 13.20	. . . . .	. . . . .	11	19
The Glendale Ditch, first extension. . . . .	Beaver . . . . .	May 1, 1865	2	8	. . . . .	12	20
The Morey Ditch . . . . .	Beaver . . . . .	May 24, 1865	5	. . . . .	. . . . .	13	21
The Burroughs Ditch . . . . .	Hardscrabble . . . . .	May 25, 1865	1	. . . . .	. . . . .	3	22
The O'Brien Ditch. . . . .	Four Mile . . . . .	Dec. 10, 1865	2.50	. . . . .	. . . . .	8	23

The Cottage Ranch Ditch . . . . .	Four Mile . . . . .	Feb. 28, 1866	3	. . . . .	. . . . .	9	24
The Wafford Ditch, first addition appropriation . . . . .	Four Mile . . . . .	April 1, 1866	. . . . .	. . . . .	. . . . .	10	25
The Banks Ditch . . . . .	Adobe . . . . .	May 31, 1866	1	. . . . .	. . . . .	1	26
The Craig-Beckham Ditch, first extension . . . . .	Four Mile . . . . .	May 31, 1867	. . . . .	. . . . .	. . . . .	11	27
The Pauls Ditch . . . . .	Mineral . . . . .	May 31, 1867	.50	. . . . .	. . . . .	2	27a
The Garden Park Ditch . . . . .	Four Mile . . . . .	Sept. 10, 1867	6	. . . . .	. . . . .	12	28
The Coleman Ditch . . . . .	Hardscrabble . . . . .	Nov. 3, 1867	2.5625	. . . . .	. . . . .	4	29
The Terry Ditch . . . . .	Four Mile . . . . .	Nov. 30, 1867	3	. . . . .	. . . . .	13	30
The Aaron Ripley Ditch . . . . .	Four Mile . . . . .	Feb. 28, 1868	2.50	. . . . .	. . . . .	14	31
The Hennington Ditch . . . . .	Hardscrabble . . . . .	Mar. 4, 1868	2.75	. . . . .	. . . . .	5	32
The Craig-Beckham Ditch, second extension . . . . .	Four Mile . . . . .	May 31, 1868	. . . . .	. . . . .	. . . . .	15	33
The Monteralle Ditch . . . . .	Hardscrabble . . . . .	May 31, 1868	1.125	. . . . .	. . . . .	6	33a
The O'Brien Ditch, first addition appropriation . . . . .	Four Mile . . . . .	April 20, 1869	. . . . .	. . . . .	. . . . .	16	34
The 1869 Ditch . . . . .	Hardscrabble . . . . .	April 30, 1869	1	. . . . .	. . . . .	7	35
The Adams Ditch . . . . .	Four Mile . . . . .	April 30, 1869	3	. . . . .	. . . . .	17	35a
The Reese Ditch . . . . .	Hardscrabble . . . . .	May 1, 1869	1.125	. . . . .	. . . . .	8	36
The Howard Ditch . . . . .	Four Mile . . . . .	June 1, 1869	* 3.26	. . . . .	. . . . .	18	37
The Cottage Rock Ranch Ditch, first addition appropriation . . . . .	Four Mile . . . . .	Mar. 15, 1870	. . . . .	. . . . .	. . . . .	19	38
The Tenazzi Ditch, second appropriation . . . . .	Hardscrabble . . . . .	Mar. 31, 1870	1	. . . . .	. . . . .	9	39
The Wafford Ditch, second addition appropriation . . . . .	Four Mile . . . . .	April 1, 1870	. . . . .	. . . . .	. . . . .	20	40
The Marcott Ditch . . . . .	Four Mile . . . . .	April 30, 1870	1.50	. . . . .	. . . . .	21	41

\* Capacity as computed.

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority.	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The First Leon Ditch . . . . .	Four Mile creek . . . . .	May 1, 1870	* 13.95	. . . . .	. . . . .	22	42
The Pauls Ditch, first extension . . . . .	Mineral creek . . . . .	May 31, 1870	. . . . .	. . . . .	. . . . .	3	43
The George Ditch . . . . .	Four Mile creek . . . . .	June 1, 1870	* 3.26	. . . . .	. . . . .	23	44
The Doris Ditch . . . . .	Four Mile creek . . . . .	June 7, 1870	4.50	. . . . .	. . . . .	24	45
The Cascade Ditch . . . . .	Hardscrabble creek . . . . .	Aug. 1, 1870	4.8125	. . . . .	. . . . .	10	46
The Kittredge Ditch No. 2 . . . . .	Four Mile creek . . . . .	Aug. 31, 1870	2	. . . . .	. . . . .	25	47
The Corporon Ditch . . . . .	Hardscrabble creek . . . . .	Nov. 30, 1870	1	. . . . .	. . . . .	11	48
The Bruce's North Side Ditch . . . . .	4 mile of Hardscrabble creek . . . . .	Dec. 25, 1870	.875	. . . . .	. . . . .	1	49
The Thomas Patton Ditch No. 1 and the Thomas Patton Ditch No. 2 . . . . .	Beaver creek . . . . .	April 15, 1871	4.99	. . . . .	. . . . .	14	50
The Lobach Ditch . . . . .	Hardscrabble creek . . . . .	April 15, 1871	.50	. . . . .	. . . . .	12	51
The Peggy Ditch, first extension . . . . .	Beaver creek . . . . .	April 21, 1871	. . . . .	. . . . .	. . . . .	15	52
The West Perry Ditch . . . . .	Beaver creek . . . . .	May 1, 1871	3.65	. . . . .	. . . . .	16	53
The Hurlbut Ditch . . . . .	Beaver creek . . . . .	May 2, 1871	6.05	. . . . .	. . . . .	17	54
The Tremayne Brothers Ditch No. 1 . . . . .	Four Mile creek . . . . .	May 10, 1871	3	. . . . .	. . . . .	26	55
The McTire Ditch . . . . .	Four Mile creek . . . . .	May 30, 1871	* 1.59	. . . . .	. . . . .	27	56

The Percival Ditch . . . . .	Hardscrabble creek . . . . .	June 1, 1871	1	. . . . .	. . . . .	13	57
The Draper Ditch . . . . .	Hardscrabble creek . . . . .	Oct. 1, 1871	1.25	. . . . .	. . . . .	14	58
The Melrose Ditch . . . . .	Hardscrabble creek . . . . .	Oct. 31, 1871	2	. . . . .	. . . . .	15	59
The Vaughn Ditch . . . . .	Hardscrabble creek . . . . .	Dec. 1, 1871	2.875	. . . . .	. . . . .	16	60
The Windourn Ditch . . . . .	Beaver creek . . . . .	Dec. 20, 1871	* 5.32	. . . . .	. . . . .	18	61
The Barker Ditch . . . . .	Adobe creek . . . . .	Dec. 31, 1871	.50	. . . . .	. . . . .	4	62
The Murphy Ditch . . . . .	Four Mile creek . . . . .	Jan. 1, 1872	5	. . . . .	. . . . .	28	63
The McClure Ditch . . . . .	Beaver creek . . . . .	Jan. 2, 1872	5	. . . . .	. . . . .	19	64
The Titworth Ditch, third extension and second enlargement . . . . .	Four Mile creek . . . . .	Feb. 28, 1872	17	. . . . .	. . . . .	29	65
The Garden Park Ditch, first extension . . . . .	Four Mile creek . . . . .	May 15, 1872	. . . . .	. . . . .	. . . . .	30	66
The Gomer Ditch . . . . .	Flint creek . . . . .	April 1, 1872	* 4.97	. . . . .	. . . . .	1	67
The Witchee Ditch No. 1 . . . . .	Four Mile creek . . . . .	April 14, 1872	* 6.14	. . . . .	. . . . .	31	68
The Thomas Patton Ditch No. 1, first extension . . . . .	Beaver creek . . . . .	April 15, 1872	. . . . .	. . . . .	. . . . .	20	69
The Thomas Patton Ditch No. 2, second enlargement . . . . .	Beaver creek . . . . .	April 15, 1872	. . . . .	. . . . .	. . . . .	20a	69a
The Drury Ditch . . . . .	Four Mile creek . . . . .	April 30, 1872	* 2.52	. . . . .	. . . . .	32	70
The Watson Ditch No. 1 . . . . .	Four Mile creek . . . . .	May 1, 1872	1.62	. . . . .	. . . . .	33	71
The Pauls <i>alias</i> Frazier Ditch . . . . .	Four Mile creek . . . . .	June 20, 1872	* 1.21	. . . . .	. . . . .	34	72
The Tremayne Brothers Ditch No. 2 . . . . .	Four Mile creek . . . . .	June 30, 1872	1.64	. . . . .	. . . . .	35	73
The Home Ditch . . . . .	Mineral creek . . . . .	Sept. 7, 1872	.50	. . . . .	. . . . .	5	74
The Banta and Merit Ditch . . . . .	Beaver creek . . . . .	Jan. 2, 1873	9.60	. . . . .	. . . . .	21	75
The Upper Perry Ditch . . . . .	Beaver creek . . . . .	Jan. 31, 1873	* 1.75	. . . . .	. . . . .	22	76

\* Capacity as computed.

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Wicher Ditch No. 2 . . . . .	Four Mile creek . . . . .	Mar. 31, 1873	* 4.35	. . . . .	. . . . .	36	77
The Gomer Ditch Extension . . . . .	Flint creek . . . . .	April 1, 1873	. . . . .	. . . . .	. . . . .	2	78
The Breeces South Side Ditch . . . . .	{ Four mile of Hard- scrabble creek . . . . . }	April 1, 1873	.50	. . . . .	. . . . .	2	79
The Caeradock Ditch . . . . .	Flint creek . . . . .	April 10, 1873	17.70	. . . . .	. . . . .	3	80
The Bates Ditch, first extension . . . . .	Beaver creek . . . . .	April 15, 1873	. . . . .	. . . . .	. . . . .	24	81
The O'Brien Ditch, second additional appropriation . . . . .	Four Mile creek . . . . .	April 30, 1873	. . . . .	. . . . .	. . . . .	37	82
The R. D. Williams Ditch No. 1 . . . . .	Beaver creek . . . . .	May 31, 1873	* 3.37	. . . . .	. . . . .	25	83
The George Ditch, first extension . . . . .	Four Mile creek . . . . .	June 1, 1873	. . . . .	. . . . .	. . . . .	38	84
The Kittredge Ditch No. 1 . . . . .	Four Mile creek . . . . .	June 15, 1873	2.33	. . . . .	. . . . .	39	85
The Percival Ditch, first enlargement . . . . .	Hardscrabble creek . . . . .	Nov. 1, 1873	. . . . .	. . . . .	. . . . .	17	86
The Allen Ditch . . . . .	Hardscrabble creek . . . . .	May 31, 1874	1.8425	. . . . .	. . . . .	18	87
The Reese Ditch, first enlargement and extension . . . . .	Hardscrabble creek . . . . .	April 15, 1874	1.4375	2.6525	. . . . .	19	88
The Draper Ditch, first enlargement . . . . .	Hardscrabble creek . . . . .	April 30, 1874	.6875	1.9375	. . . . .	20	89
The Breeces North Side Ditch, the Allen extension of . . . . .	{ Four mile of Hard- scrabble creek . . . . . }	April 30, 1874	.875	. . . . .	. . . . .	3	89a
The Thomas Patton Ditch No. 2, first extension . . . . .	Beaver creek . . . . .	May 1, 1874	. . . . .	. . . . .	. . . . .	26	90

The Watson Ditch No. 2 . . . . .	May 31, 1874	7	. . . . .	. . . . .	40	91
The Second Leon Ditch . . . . .	June 14, 1874	* 7.80	. . . . .	. . . . .	41	62
The First Barnard Ditch . . . . .	June 15, 1874	* 4.62	. . . . .	. . . . .	42	93
The Westhofer Ditch . . . . .	July 15, 1874	.50	. . . . .	. . . . .	21	94
The Coleman Ditch, second appropriation	April 1, 1875	.3125	. . . . .	. . . . .	22	95
The Peggy Ditch, second extension . . . . .	April 15, 1875	. . . . .	. . . . .	. . . . .	27	96
The Kestle Ditch . . . . .	April 30, 1875	2.30	. . . . .	. . . . .	43	97
The Second Perry Ditch . . . . .	May 1, 1875	1.75	. . . . .	. . . . .	28	98
The Tremayne Brothers Ditch No. 3 . . . . .	May 10, 1875	2.30	. . . . .	. . . . .	44	99
The Watson Ditch No. 2, first enlargement	May 31, 1875	7	. . . . .	. . . . .	45	100
The Westall Ditch . . . . .	June 30, 1875	8	. . . . .	. . . . .	46	101
The South Ditch . . . . .	July 1, 1875	* 1.53	. . . . .	. . . . .	47	102
The Menton Ditch . . . . .	Jan. 3, 1876	* 9.18	. . . . .	. . . . .	29	103
The Cascade Ditch, second appropriation . . . . .	Mar. 1, 1876	1.0375	5.85	. . . . .	23	104
The Lower Ditch . . . . .	April 15, 1876	* 2.37	. . . . .	. . . . .	48	105
The Cottage Rock Ranch Ditch, second additional appropriation	April 30, 1876	. . . . .	. . . . .	. . . . .	49	106
The Coffman Ditch . . . . .	May 15, 1876	* 3.60	. . . . .	. . . . .	30	107
The Hulbert Ditch, first enlargement . . . . .	May 31, 1876	. . . . .	. . . . .	. . . . .	31	108
The Spring Ditch . . . . .	June 1, 1876	* 2.30	. . . . .	. . . . .	50	109
The Vaughn Ditch, second appropriation . . . . .	Mar. 1, 1877	.6875	2.275	. . . . .	24	110
The Hight Ditch . . . . .	April 16, 1877	* 3.93	. . . . .	. . . . .	32	111

\* Capacity, as computed.



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH, CANAL, OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Kelly Ditch . . . . .	Beaver creek . . . . .	April 18, 1877	5.20	.	.	33	112
The West Ditch . . . . .	Four-Mile creek . . . . .	April 30, 1877	* 2.03	.	.	51	113
The Kittredge Ditch No. 1, first enlargement . . . . .	Four-Mile creek . . . . .	May 31, 1877	2	.	.	52	114
The Banks Ditch, second appropriation . . . . .	Adobe creek . . . . .	June 1, 1877	.	.	.	6	115
The Mineral Creek Ditch . . . . .	Mineral creek . . . . .	June 5, 1877	.625	.	.	7	116
The Nichols Extension of the Allen Extension of Breece's North Side Ditch . . . . .	4-Mile of Hardscrabble . . . . .	July 31, 1877	1.5625	4.275	.	4	117
The Sykes, Cypert and Chatham Ditch . . . . .	Hardscrabble creek . . . . .	Aug. 1, 1877	1.7375	.	.	25	118
The Allen Ditch . . . . .	4-Mile of Hardscrabble . . . . .	Aug. 1, 1877	.	.	.	5	119
The Witcher Ditch No. 3 . . . . .	Four-Mile creek . . . . .	Nov. 31, 1877	* 5.48	.	.	53	120
The R. D. Williams Ditch No. 1, first enlargement . . . . .	Beaver creek . . . . .	May 1, 1878	.	.	.	34	121
The West Perry Ditch, first extension . . . . .	Beaver creek . . . . .	May 4, 1878	.	.	.	35	122
The Island Ditch No. 1 . . . . .	Beaver creek . . . . .	May 6, 1878	* 2.23	.	.	36	123
The Lewis Lower Ditch . . . . .	Hardscrabble creek . . . . .	May 31, 1878	.	.	.	26	124
The Tremayne Brothers' Ditch No. 4 . . . . .	Four-Mile creek . . . . .	June 1, 1878	1.64	.	.	54	125
The Lower Ditch, first additional appropriation . . . . .	Four-Mile creek . . . . .	April 1, 1879	.	.	.	55	126

The Westall Ditch, first extension . . . . .	Four-Mile creek . . . . .	May 1, 1879	. . . . .	. . . . .	56	127
The Dick Steele Ditch, first extension . . . . .	Adobe creek . . . . .	June 15, 1879	. . . . .	. . . . .	5	128
The Frazier <i>alias</i> Paul's Ditch, first extension . . . . .	Four-Mile creek . . . . .	Jan. 1, 1880	. . . . .	. . . . .	57	129
The Paul's Ditch, second extension . . . . .	Mineral creek . . . . .	Mar. 1, 1880	. . . . .	. . . . .	9	130
The Daggett Ditch . . . . .	Four-Mile creek . . . . .	Mar. 15, 1880	* 3.15	. . . . .	58	131
The Barber Ditch, second appropriation . . . . .	Adobe creek . . . . .	Mar. 15, 1880	. . . . .	. . . . .	10	131a
The Lucas Ditch . . . . .	Four-Mile creek . . . . .	April 30, 1880	3	. . . . .	59	132
The West Ditch, first extension . . . . .	Four-Mile creek . . . . .	May 31, 1880	. . . . .	. . . . .	60	133
The Harry Ditch . . . . .	Four-Mile creek . . . . .	Aug. 1, 1880	* 2.60	. . . . .	61	134
The Thomas Patten Ditch No. 1, second extension . . . . .	Beaver creek . . . . .	Dec. 31, 1880	. . . . .	. . . . .	37	135
The West Hughes Ditch . . . . .	Beaver creek . . . . .	Feb. 28, 1881	* 3.87	. . . . .	38	136
The Curtis Ditch . . . . .	Beaver creek . . . . .	Mar. 14, 1881	* 2.47	. . . . .	39	137
The Crose's Extension of the Frazier Ditch . . . . .	Four-Mile creek . . . . .	April 1, 1881	. . . . .	. . . . .	62	138
The Park Ditch . . . . .	Beaver creek . . . . .	Jan. 19, 1882	10.50	. . . . .	40	139
The East Hughes Ditch . . . . .	Beaver creek . . . . .	April 29, 1882	* 6.59	. . . . .	41	140
The Fausher Ditch. . . . .	Beaver creek. . . . .	May 1, 1882	* 4.10	. . . . .	42	141
The R. D. Williams Ditch No. 2 . . . . .	Beaver creek. . . . .	April 2, 1883	* 2.10	. . . . .	43	142
The West Hughes Ditch, first extension . . . . .	Beaver creek. . . . .	April 16, 1883	. . . . .	. . . . .	44	143
The Minton Ditch, change in course. . . . .	Beaver creek. . . . .	April 16, 1883	. . . . .	. . . . .	44a	143a
The Peggy Ditch, third extension . . . . .	Beaver creek. . . . .	Feb. 25, 1884	. . . . .	. . . . .	45	144
The Cascade Ditch, first extension and third appropriation . . . . .	Hardscrabble creek . . . . .	Mar. 1, 1884	.125	. . . . .	27	145

\* Capacity as computed.

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Vaughn Ditch, third appropriation. . . . .	Hardscrabble creek . . . . .	Mar. 15, 1884	.0625	. . . . .	. . . . .	28	146
The Garden Park Ditch, second extension . . . . .	Four-Mile creek . . . . .	April 20, 1884	. . . . .	. . . . .	. . . . .	63	147
The Sanders Ditch. . . . .	Hardscrabble creek . . . . .	April 30, 1884	.50	. . . . .	. . . . .	29	148
The Lucas Ditch, first additional appropriation. . . . .	Four-Mile creek . . . . .	April 30, 1884	. . . . .	. . . . .	. . . . .	64	148a
The Sykes, Cypert and Chatham Ditch . . . . .	Hardscrabble creek . . . . .	May 1, 1884	.275	. . . . .	. . . . .	30	149
The O'Brien Ditch, third additional appropriation . . . . .	Four-Mile creek . . . . .	May 10, 1884	. . . . .	. . . . .	. . . . .	64a	150
The Westall Ditch, second additional appropriation . . . . .	Four-Mile creek . . . . .	May 31, 1884	. . . . .	. . . . .	. . . . .	65	151
The Bowerman Ditch . . . . .	Adobe creek . . . . .	June 1, 1884	.50	. . . . .	. . . . .	11	152
The Thomas Patton Ditch No. 2 . . . . .	Beaver creek. . . . .	Dec. 29, 1884	. . . . .	. . . . .	. . . . .	46	152
The Melrose Ditch, second appropriation. . . . .	Hardscrabble creek . . . . .	Mar. 1, 1885	. . . . .	. . . . .	. . . . .	31	153
The Sykes, Cypert and Chatham Ditch, third appropriation . . . . .	Hardscrabble creek . . . . .	Mar. 15, 1885	.4575	3.45	. . . . .	32	155
The Island Ditch. . . . .	Beaver creek. . . . .	April 1, 1885	4.10	. . . . .	. . . . .	47	156
The Greenwood Ditch, second appropriation . . . . .	Hardscrabble creek . . . . .	April 1, 1885	.50	. . . . .	. . . . .	33	156a
The Aaron Ripley Ditch, first additional appropriation . . . . .	Four-Mile creek . . . . .	April 11, 1885	. . . . .	. . . . .	. . . . .	66	157
The Reese Ditch Extension . . . . .	Hardscrabble creek . . . . .	April 15, 1885	. . . . .	. . . . .	. . . . .	34	158

The East Hughes Ditch, first extension. . . . .	Beaver creek. . . . .	April 15, 1885	. . . . .	. . . . .	48	158a
The Rhodes and Tennant Ditch. . . . .	Adobe creek. . . . .	June 19, 1885	.75	. . . . .	12	159
The Fremont Water Supply Company's Canal. . . . .	Beaver creek. . . . .	July 15, 1885	500	. . . . .	49	160
The Coleman Ditch, third appropriation. . . . .	Hardscrabble creek. . . . .	Mar. 1, 1886	.375	3-25	35	161
The Cascade Ditch, fourth appropriation. . . . .	Hardscrabble creek. . . . .	Mar. 15, 1886	.75	6-75	36	162
The Allen Ditch, first enlargement. . . . .	Hardscrabble creek. . . . .	Mar. 20, 1886	. . . . .	. . . . .	37	163
The East Hughes Ditch, second extension. . . . .	Beaver creek. . . . .	Mar. 27, 1886	. . . . .	. . . . .	50	164
The Wafford Ditch, third additional appropriation. . . . .	Four-Mile creek. . . . .	April 1, 1886	. . . . .	. . . . .	67	165
The Melrose Ditch, third appropriation. . . . .	Hardscrabble creek. . . . .	April 1, 1886	. . . . .	. . . . .	38	165a
The Felch's West Side Ditch. . . . .	Four-Mile creek. . . . .	June 1, 1886	2	. . . . .	68	166
The Garden Park Ditch, third additional appropriation. . . . .	Four-Mile creek. . . . .	Aug. 31, 1886	. . . . .	. . . . .	69	167
The Lucas Ditch, second additional appropriation. . . . .	Four-Mile creek. . . . .	April 30, 1887	. . . . .	. . . . .	70	168
The Westall Ditch, second extension and third additional approp'n	Four-Mile creek. . . . .	May 31, 1887	. . . . .	. . . . .	71	169
The Second Barnard Ditch. . . . .	Four-Mile creek. . . . .	Mar. 31, 1888	* 3.26	. . . . .	72	170
The Aaron Ripley Ditch, second additional appropriation. . . . .	Four-Mile creek. . . . .	April 1, 1889	. . . . .	. . . . .	73	171
The Cottage Rock Ranch Ditch, third increased appropriation. . . . .	Four-Mile creek. . . . .	April 30, 1889	. . . . .	. . . . .	74	172
The Lucas Ditch, third additional appropriation. . . . .	Four-Mile creek. . . . .	May 15, 1889	. . . . .	. . . . .	75	173
The Westall Ditch, fourth additional appropriation. . . . .	Four-Mile creek. . . . .	May 31, 1889	. . . . .	. . . . .	76	174

## STATEMENT CONCERNING DITCHES

IN DISTRICT NO. 12, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, AND FOR WHICH NO DECREES HAVE BEEN ISSUED.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Grand Cañon Water Supply Ditch . . . . .	Arkansas river . . . . .	Jan. 28, 1889	Feb. 28, 1887	2,000	Frank M. Brown
The McGregor's Ditch . . . . .	Willow creek . . . . .	Mar. 21, 1889	May 1, 1887	1	Robert McGregor
The Arkansas River and Beaver Creek and Irrigating Ditch . . . . .	Arkansas river . . . . .	April 22, 1889	Not given . .	1,000	Libbeus L. Harding
The Teller Canal . . . . .	Arkansas river . . . . .	July 19, 1889	April 30, 1889	2,850	H. M. Teller and seventeen others
The Woodruff-Tells Ditch . . . . .	Arkansas river . . . . .	Aug. 6, 1889	Dec. 18, 1884	20	Daniel T. Woodruff and Emanuel Tells
The Boehmer Ditch . . . . .	Boehmer creek, etc . . . . .	Sept. 18, 1889	June 20, 1889	53	Edwin J. Eaton
The Ditch of E. C. Krepps . . . . .	Hayden creek . . . . .	Sept. 24, 1889	. . . . 1884	3-91	Ephraim C. Krepps
The Krepps Ditch, amended statement . . . . .	Arkansas river . . . . .	Oct. 1, 1889	. . . . 1884	3-91	Ephraim C. Krepps
The State Canal No. 1 . . . . .	Arkansas river . . . . .	Nov. 21, 1889	June 12, 1890	605	The State of Colorado
The Stonehenge Canal . . . . .	Eight-Mile creek . . . . .	Jan. 11, 1890	Oct. 12, 1889	10	Frank P. Blake <i>et al</i>
The Cornport Ditch, ext. and enl. . . . .	Hardscrabble creek . . . . .	Mar. 19, 1890	Feb. 2, 1888	1.12	A. J. Sutton
The Bridge Ditch No. 3 . . . . .	Arkansas river . . . . .	Mar. 20, 1890	Mar. 26, 1889	23	Anasa W. Lucas
The John Baker Ditch . . . . .	Cottonwood creek . . . . .	Mar. 25, 1890	Not given . .	Indefinite	John Baker
The McClure Ditch . . . . .	Current creek . . . . .	May 7, 1890	April 25, 1890	10	W. F. McClure

The Percival Ditch Extension . . .	Hardscrabble creek . . .	May 9, 1890	April 15, 1889	2.25	. . . . . M. C. and E. E. Jennings
The Mrs. Emily West's '73 Ditch . . .	West creek . . .	July 8, 1890	. . . . 1873	1.70	. . . . . Mrs. Emily West
The Mrs. Emily West's '87 Ditch . . .	West creek . . .	July 8, 1890	. . . . 1887	Not stated	. . . . . Mrs. Emily West
The Ute Park Ditch . . . . .	Beaver creek . . . . .	July 14, 1890	Feb., 1889	50	. . . . . Thomas R. Meritt and Frank P. Blake
The Timber Line Ditch . . . . .	Branches of Beaver creek . . .	July 30, 1890	{ June 10, 1890	19	} . . . . . Edwin J. Eaton
The Feeder Ditch . . . . .			{ June 10, 1890	45	
The Beaver Creek Ditch . . . . .	Beaver creek, etc . . . . .	Sept. 13, 1890	July 22, 1890	52	. . . . . The City of Colorado Springs
The McShane Ditch . . . . .	Bochmer creek . . . . .	Sept. 13, 1890	July 23, 1890	14	. . . . . The City of Colorado Springs





# STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 12, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OR WELL.	Total depth thereof, in feet	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
Cañon City Oil Company { Well No. 1 . . . . .	1,400	6	373	280	722	1,130	. .	Sec. 23, T. 18 S., R. 70 W	700	Pipe drawn, still flows a little
Cons. Oil and Land Co. . .	780	None	. .	730	. . .	. . .	. .	Sec. 13, T. 19 S., R. 69 W .	1	. . . . . Warm soda water
Florence Oil and R. Co. . .	. . .	. . .	. . .	1,000	. . .	. . .	. . .	Sec. 14, T. 19 S., R. 69 W .	450	. . . . .
Florence Soda Well . . .	800	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 14, T. 19 S., R. 69 W .	425	. . . . .

*Water District No. 13*—Will J. Orange, Commissioner, Silver Cliff.

Ditch-rights not adjudicated, and no report from Water Commissioner.

# STATEMENT CONCERNING DITCHES

IN DISTRICT NO. 13, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Name of stream from which water is taken	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Anton Elter Ditch . . . . .	Colony creek . . . . .	July 8, 1889	June 18, 1883	1	Anton Elter
The Etzel Ditch . . . . .	Dieckmann creek . . . . .	July 8, 1889	June 1, 1889	1	Gottfried Etzel
The Brewer Ditch No. 1 . . . . .	Spring creek . . . . .	Jan. 18, 1890	Sept. 15, 1889	Indefinite	Alvy Brewer
The Brewer Ditch No. 2 . . . . .	Spring creek . . . . .	Jan. 18, 1890	April 15, 1880	Indefinite	Alvy Brewer
The Brewer Ditch No. 3 . . . . .	Spring creek . . . . .	Jan. 18, 1890	May 1, 1880	Indefinite	Alvy Brewer
The Schetelat Ditch . . . . .	Grape creek . . . . .	Jan. 24, 1890	1875	1	George Schetelat and Paul Roll
The Hamlin North Ditch . . . . .	Poverty creek . . . . .	May 24, 1890	July 15, 1889	1	Julia E. Hamlin
The Hamlin South Ditch . . . . .	Poverty creek . . . . .	May 24, 1890	Sum'er, 1883	1	Julia E. Hamlin
The Hagen Brothers Ditch No. 1 . . . . .	Hart Nock creek . . . . .	June 5, 1890	June 25, 1889	Indefinite	Hagen Brothers
The Hagen Brothers Ditch No. 2 . . . . .	Hart Nock creek . . . . .	June 5, 1890	July 1, 1885	Indefinite	Hagen Brothers
The Hagen Brothers Ditch No. 3 . . . . .	Hart Nock creek . . . . .	June 5, 1890	1879	Indefinite	Hagen Brothers
The Hagen Brothers Ditch No. 4 . . . . .	Hart Nock creek . . . . .	June 5, 1890	May 15, 1887	Indefinite	Hagen Brothers
The Hagen Brothers Ditch No. 5 . . . . .	Hart Nock creek . . . . .	June 5, 1890	Sept. 1883	Indefinite	Hagen Brothers
The Hagen Brothers Ditch No. 6 . . . . .	Hart Nock creek . . . . .	June 5, 1890	July 10, 1882	Indefinite	Hagen Brothers

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH OR CANAL,	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Hagen Brothers Ditch No. 7 . . . . .	Hart Nock creek . . . . .	June 5, 1890	May 15, 1884	Indefinite	. . . . . Hagen Brothers
The Hagen Brothers Ditch No. 8 . . . . .	Hagen creek . . . . .	June 5, 1890	April 5, 1889	Indefinite	. . . . . Hagen Brothers
The Henry Cress Ditch . . . . .	Swift creek . . . . .	June 21, 1890	June, 1882	2	. . . . . Henry Cress
The Katzenstein Ditch . . . . .	West Taylor creek . . . . .	July 19, 1890	Mar. 15, 1873	2	. . . . . Alfred Katzenstein
The Voris Brothers Ditch No. 1 . . . . .	Grape creek . . . . .	Aug. 14, 1890	Sum'm'r, 1871	Indefinite	. . . Sarah E. Metz and George W. Voris
The Voris Brothers Ditch No. 2 . . . . .	Grape creek . . . . .	Aug. 14, 1890	Sum'm'r, 1877	Indefinite	. . . Sarah E. Metz and George W. Voris
The Lensh Brothers Ditch No. 1 . . . . .	North Colony creek . . . . .	Oct. 10, 1890	May 16, 1890	2	. . . . . Lensh Brothers
The Lensh Brothers Ditch No. 2 . . . . .	North Colony creek . . . . .	Oct. 10, 1890	May 1, 1883	1	. . . . . Lensh Brothers
The Lensh Brothers Ditch No. 3 . . . . .	Middle Colony creek . . . . .	Oct. 10, 1890	May 5, 1888	1	. . . . . Lensh Brothers
The Lensh Brothers Ditch No. 4 . . . . .	Middle Colony creek . . . . .	Oct. 10, 1890	April 15, 1885	1	. . . . . Lensh Brothers
The Lensh Brothers Ditch No. 5 . . . . .	Colony creek . . . . .	Oct. 10, 1890	April 15, 1882	1.33	. . . . . Lensh Brothers
The Lensh Brothers Ditch No. 6 . . . . .	Colony creek . . . . .	Oct. 10, 1890	April 20, 1882	18	. . . . . Lensh Brothers
The Heathfield Ditch . . . . .	Cottonwood creek . . . . .	Oct. 24, 1890	May 5, 1875	3	. . . . . George Heathfield

*Water District No. 14*—John W. Horgan, Commissioner, Pueblo.

Ditch rights not adjudicated, and no report from Water Commissioner.



## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 14, RELATIVE TO WHICH PLATS AND STATEMENTS WERE FILED IN THE STATE ENGINEER'S OFFICE  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Bessemer Ditch . . . . .	Arkansas river	Jan. 19, 1889	Nov. 20, 1888	415	T. Haskins DuPuy
The Bessemer Ditch No. 2 . . . . .	Arkansas river . . . . .	Mar. 7, 1889	Dec. 15, 1888	415	T. Haskins DuPuy
The Arkansas, St. Charles and Huerfano Ditch . . . . .	Arkansas river . . . . .	Mar. 7, 1889	Mar. 4, 1889	450	{ The Arkansas, St. Charles and Huerfano Land and Irrigation
The Brackett Ditch . . . . .	Brackett creek . . . . .	Mar. 12, 1889	Mar. 7, 1889	2.50	{ Martha J. Holden
The Oxford Farmers Ditch . . . . .	Arkansas river . . . . .	April 10, 1889	Jan. 10, 1889	243	{ The Oxford Farmers Ditch Company, formerly the Enterprise Ditch
The Ditch of the Bessemer Ditch Co . . . . .	Arkansas river . . . . .	June 1, 1889	Mar. 5, 1889	400	{ The Bessemer Ditch Company
The Hamp-Bell Ditch . . . . .	Arkansas river . . . . .	June 20, 1889	Jan. 8, 1889	12.45	{ W. Francis Hamp and George Bell
The Colorado Canal . . . . .	Arkansas river . . . . .	July 8, 1889	April 10, 1889	3,372	{ The Colorado Land and Canal Company
The Ditch No. 2 . . . . .	Springs . . . . .	Jan. 9, 1890	Spring, 1876	7.80	{ Benito Trujillo <i>et al</i>
The Booth Ditch, Christian Fink's extension of . . . . .	Arkansas river . . . . .	Mar. 12, 1890	Dec. 15, 1889	23.32	{ Christian Fink
The Ditch of the Bessemer Ditch Co., supplemental map of . . . . .	Arkansas river . . . . .	April 11, 1890	May 1, 1887	400	{ The Bessemer Ditch Company
The Six Mile Arroyo Ditch No. 1 . . . . .	Six-Mile arroyo . . . . .	April 15, 1890	Mar. 17, 1889	10	{ Robert Grant
The Pueblo Water Works Ditch . . . . .	Arkansas river . . . . .	May 30, 1889	Oct. 25, 1889	113.10	{ The Pueblo Water Works

The Otero Canal . . . . .	Arkansas river . .	June 2, 1890	Mar. 3, 1890	457.92	. . . . . The Otero Canal Company
The Colorado Canal . . . . .	Arkansas river . .	June 9, 1890	April 10, 1889	756.28	. . . . . The Colorado Land and Water Company
The Bessemer Ditch, explanatory statement . . . . .	Arkansas river . .	Nov. 29, 1890	. . . . .	. . . . .	. . . . . The Bessemer Ditch Company

# STATEMENT CONCERNING RESERVOIRS

IN DISTRICT NO 14, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Bessemer Ditch Company's Reservoirs	Arkansas river	Bessemer Ditch	June 1, 1889	Mar. 5, 1889	189,000,000	The Bessemer Ditch Co
					240,000,000	
					120,000,000	
					47,600,000	
					51,840,000	
					15,840,000	
					28,800,000	
					31,280,000	
					34,500,000	
					43,200,000	
					34,560,000	
					54,000,000	
					112,500,000	

Christian Fink's Reservoirs . . . .	{ No. 1 .	Arkansas river . . . .	Booth Ditch . . . .	Mar. 12, 1890	Dec. 15, 1890	{ 1,609,978	. . . . Christian Fink
	No. 2 .					{ 164,390	
	{ No. 3 .					{ 234,703	
Supplemental map of the Bessemer Ditch Company's Reservoirs . . . .	{ No. 1 .					{ 7,000,000	. The Bessemer Ditch Co
	No. 2 .					{ 19,000,000	
	No. 3 .					{ 28,000,000	
	No. 4 .					{ 20,000,000	
	No. 5 .					{ 28,000,000	
	No. 6 .	Arkansas river . . . .	Bessemer Ditch . . . .	April 11, 1890	May 1, 1887	{ 29,000,000	
The Six Mile Arroyo Res'vr No. 1	No. 7 .					{ 14,000,000	
	No. 8 .					{ 900,000	
	No. 9 .					{ 4,000,000	
	No. 10 .					{ 62,000,000	
		Six-Mile Arroyo . . . .	Six-Mile Arroyo Ditch	April 15, 1890	Mar. 15, 1889	{ 3,285,000	
The Pueblo Water Works Reservoirs {	No. 1 .					{ 1,738,800	The Pueblo Water Works
	No. 2 .	Arkansas river . . . .	Water Works Ditch . . . .	May 30, 1890	Oct. 25, 1889	{ 1,758,667	

STATEMENT CONCERNING RESERVOIRS—*Concluded.*

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
(No. 1 . . .					7,000,000	
No. 2 . . .					19,000,000	
No. 3 . . .					28,000,000	
No. 4 . . .					20,000,000	
No. 5 . . .					28,000,000	
No. 6 . . .					29,000,000	
No. 7 . . .					14,000,000	
No. 8 . . .					900,000	
No. 9 . . .					38,500,000	
No. 10 . . .					62,000,000	
Explanatory statement of the Bessemer Ditch Company's Reservoirs	Arkansas river . . . . .	Bessemer Ditch . . . . .	Nov. 28, 1890			The Bessemer Ditch Company

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT NO. 14, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OR WELL	Total depth thereof in feet	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons per minute	REMARKS.
				First flow	Second flow	Third flow	Fourth flow			
Mineral Park . . . . .	1,150	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 35, T. 20 S., R. 65 W.	3	Strongly iron; temperature, 70°
Pariss House . . . . .	1,400	3	1,400	1,172	1,250	1,400	. . .	Sec. 36, T. 20 S., R. 65 W.	13	. . . . . Temperature, 75°
O. E. Clark . . . . .	1,402	. . .	. . .	1,166	. . .	. . .	. . .	Sec. 1, T. 21 S., R. 65 W.	87	. . . . . Used for medical baths
Columbia Heights . . . .	789	5%	532	516	779	. . .	. . .	Sec. 9, T. 21 S., R. 65 W.	3 to 5	Flowed 45 gallons per min. first
C. C. & I. Co . . . . .	1,260	4	400	. . .	. . .	. . .	. . .	Sec. 12, T. 21 S., R. 65 W.	25	. . . . . Temperature, 76°
Small's Timber Claim	772	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 17, T. 21 S., R. 65 W.	2½	. . . To be sunk to 1,200 feet
Hurlburt . . . . .	1,820	. . .	. . .	1,200	1,800	. . .	. . .	. . . . .	. . .	. . . . .



*Water District No. 15*—A. H. Smith, Commissioner, Pueblo.

Mr. Smith reports for 1890, in tabulated form, showing 46 ditches taking water, with an aggregate of  $88\frac{1}{4}$  miles in length; that 12,813 acres can be irrigated therefrom; irrigated in alfalfa, 1,066 acres; in seeded grasses 229 acres; in natural grasses 888 acres; in other crops 1,232 acres, making a total of 3,415 acres irrigated.

# COMMISSIONERS' REPORT, A. D. 1890.

DIVISION No. 2—DISTRICT No. 15.

STATE ENGINEER.

293

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in ditch
The Hicklin Ditch No. 1 . . . . .	1.50	80	3.50	150	45	. . .	15	60	. . .	. . .
The Hicklin Ditch No. 2 . . . . .	2	75	2	200	5	. . .	40	30	. . .	. . .
The Hicklin Ditch No. 3 . . . . .	1.75	75	1.50	300	5	. . .	3	50	. . .	. . .
The Hicklin Ditch No. 4 . . . . .	1	100	2.25	120	. . . . .	. . . . .	60	25	. . .	. . .
The Bryson Ditch No. 2 . . . . .	7	180	2.25	3,000	60	. . . . .	82	40	. . .	. . .
The Dotson Ditch No. 1 . . . . .	5	240	10	1,000	75	. . . . .	200	80	. . .	. . .
The Eagle Ditch . . . . .	1	120	1.25	150	25	. . . . .	15	25	. . .	. . .
The Pollard Ditch . . . . .	6	150	3.50	700	180	. . . . .	. . .	80	. . .	. . .
The Wiggins Ditch . . . . .	3	120	1.50	250	25	. . . . .	11	40	. . .	. . .
The Wagner Ditch . . . . .	3	120	1.50	260	40	. . . . .	. . .	40	. . .	. . .
The Edson Ditch . . . . .	1.25	60	.50	80	15	. . . . .	10	12	. . .	. . .
The Greyback Ditch . . . . .	2.50	120	.50	85	11	. . . . .	10	23	. . .	. . .
The Muddy Ditch . . . . .	3	65	.60	300	5	. . . . .	. . .	30	. . .	. . .

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Carlile Ditch . . . . .	1	90	2	125	10	. . . . .	85	. . . . .	. . . . .	. . . . .
The Zorn Ditch . . . . .	2	155	2.50	400	75	. . . . .	35	15	. . . . .	. . . . .
The Duckworth Ditch . . . . .	2	150	1.75	75	4	. . . . .	20	40	. . . . .	. . . . .
The Goss Ditch . . . . .	.50	150	.50	35	3	2	1.50	6	. . . . .	. . . . .
The High Line Ditch . . . . .	4.50	150	8	1,000	30	12	32	25	. . . . .	. . . . .
The Mason & Madill Ditch . . . . .	1.75	60	1	250	14	15	10	12	. . . . .	. . . . .
The Centennial Ditch . . . . .	.75	75	1	75	. . . . .	20	5	5	. . . . .	. . . . .
The Greybeal Ditch . . . . .	1.50	90	2	295	40	5	10	15	. . . . .	. . . . .
The Pearson Ditch . . . . .	1	70	1.50	150	30	. . . . .	50	25	. . . . .	. . . . .
The Joe Peterson Ditch . . . . .	2	210	2.50	140	1	25	30	35	. . . . .	. . . . .
The Lloyd Ditch . . . . .	.50	70	1.75	100	25	. . . . .	40	7	. . . . .	. . . . .
The Monitor Ditch . . . . .	1.50	70	1.75	250	12	38	11	15	. . . . .	. . . . .
The Tom Nichols Ditch . . . . .	2	90	1	100	5	44	. . . . .	6	. . . . .	. . . . .
The Lamb Ditch . . . . .	1.50	110	2	150	30	. . . . .	70	3	. . . . .	. . . . .
The O'Donnell Ditch . . . . .	1.50	45	3	300	8	. . . . .	180	. . . . .	. . . . .	. . . . .

COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Edmonson Ditch . . . . .	1.50	80	3	175	4	. . . . .	150	16	. . . . .	. . . . .
The Powell Ditch . . . . .	1.50	150	1.75	200	4	. . . . .	100	. . . . .	. . . . .	. . . . .
The McDowell Ditch . . . . .	.75	40	1.20	75	20	. . . . .	10	. . . . .	. . . . .	. . . . .
The Hill Ditch . . . . .	1	110	1	75	12	2	. . . . .	20	. . . . .	. . . . .
The Randall Ditch . . . . .	.75	80	.50	80	4	4	. . . . .	20	. . . . .	. . . . .
The Chase Ditch . . . . .	1	110	1	100	30	. . . . .	. . . . .	25	. . . . .	. . . . .
The Suttles Ditch . . . . .	1.50	120	. . . . .	110	14	. . . . .	. . . . .	65	. . . . .	. . . . .
The Rantschles Ditch . . . . .	1.25	125	1.75	180	50	10	. . . . .	25	. . . . .	. . . . .
The Moore Ditch . . . . .	2.75	80	1.60	90	12	15	6	50	. . . . .	. . . . .
The Excelsior Ditch . . . . .	1	90	.75	60	7	20	. . . . .	7	. . . . .	. . . . .
The Tucker Ditch . . . . .	1	95	.60	60	10	. . . . .	. . . . .	25	. . . . .	. . . . .
The Cavines Ditch . . . . .	1.50	75	.50	50	12	5	10	5	. . . . .	. . . . .
The Higerson Ditch . . . . .	4	110	1.50	1,000	25	5	50	75	. . . . .	. . . . .
The Huggins Ditch . . . . .	1	120	1.60	100	14	7	13	40	. . . . .	. . . . .

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Wing Ditch . . . . .	.50	120	. . . . .	80	15	. . . . .	120	20	. . . . .	. . . . .
The Smith Ditch . . . . .	1.75	110	2	140	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Scroggs Ditch . . . . .	2.50	100	3.20	250	40	. . . . .	75	80	. . . . .	. . . . .
The Dunbaugh Ditch . . . . .	1	90	.75	. . . . .	15	. . . . .	12	10	. . . . .	. . . . .
Totals in district . . . . .	88.50	. . .	67.10	12,813	1,066	229	888	1,232	. . . . .	3,415

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 15, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Tucker Ditch . . . . .	St. Charles river . . .	Feb. 7, 1890	April 1, 1864	5.10	Lawrence Tucker, Myrtle Tucker, Theodore Tucker, Hiram Tucker, Serepta Tucker and Colorado Coal & Iron Company
The Tucker Ditch Enlargement . . . . .	St. Charles river . . .	Feb. 7, 1890	Mar. 1, 1885	1.02	
The Tucker Ditch, amended statement . . . . .	St. Charles river . . .	Feb. 14, 1890	Not given	Not given	



## STATEMENTS CONCERNING RESERVOIR SITES

UNIMPROVED, IN DISTRICT No. 15, FROM THE REPORT OF THE WATER COMMISSIONER OF SAID DISTRICT.

LOCATION ON			Estimated area in acres	Length of dam in feet about	Greatest depth of dam in feet about	Material convenient for construction	Estimated cost	Estimated capacity in cubic feet	Source of supply	REMARKS
Sec.	T. S.	R. W.								
24	24	67	150	.....	.....	Natural ..	.....	.....	Green Horn creek	..... Average depth 12½ feet
31	24	66	500	200	210	.....	.....	.....	{ Green Horn and Graneros creek	..... Estimated 17,500 acre feet

*Water District No. 16*—Jonathan Milligan, Commissioner, Gardner, Colorado. Report from Commissioner.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 16, GIVING THE DATE AND ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, SO FAR AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE SIXTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE, AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Butte Valley Ditch . . . . .	Huerfano river. . . . .	May 15, 1862	1.20	. . . . .	. . . . .	1	1
The Bo. Boyce Ditch . . . . .	Huerfano river. . . . .	May 15, 1862	2	. . . . .	3.20	2	2
The Consolidated Badito and Martin Ditch. . . . .	Huerfano river. . . . .	May 15, 1862	1.30	. . . . .	3.20	3	3
The Martin Ditch . . . . .	Huerfano river. . . . .	July 15, 1862	1.40	. . . . .	4.50	4	4
The John W. Brown Ditch . . . . .	Huerfano river. . . . .	April 1, 1863	3.20	. . . . .	5.90	5	5
The Consolidated Badito and Martin Ditch, first enlargement . . . . .	Huerfano river. . . . .	April 30, 1863	.66	1.96	9.10	6	6
The Francisco and Daigre Mill Ditch, including lateral called Francisco and Daigre Lake Ditch. . . . .	Cucharas river. . . . .	May 30, 1863	.80	. . . . .	9.76	1	7
The Calf Pasture Ditch . . . . .	Cucharas river. . . . .	June 15, 1863	1.50	. . . . .	10.56	2	8
The William Craig Ditch . . . . .	Huerfano river. . . . .	May 1, 1864	2.40	. . . . .	12.06	7	9
The Francisco and Daigre Ditch, first enlargement . . . . .	Cucharas river. . . . .	June 30, 1864	11.20	12	14.46	3	10
The Guillen Ditch . . . . .	Cucharas river. . . . .	May 15, 1865	2	. . . . .	25.66	4	11

The Consolidated Dadito & Martin Ditch, appropriation by Dadito	Huerfano river . . . . .	May 15, 1865	.66	1.62	27.66	8	11
The Butte Valley Ditch, first enlargement . . . . .	Huerfano river . . . . .	May 15, 1865	1.80	3	28.32	9	12
The Pedro Gomez Ditch . . . . .	Huerfano river . . . . .	June 1, 1865	.32	. . . . .	30.12	10	13
The Martin Ditch, first enlargement . . . . .	Huerfano river . . . . .	April 1, 1866	1.60	3	30.44	11	14
The Dan Mahan Ditch . . . . .	Huerfano river . . . . .	April 17, 1866	2.50	. . . . .	32.04	12	15
The Walsenburg Ditch . . . . .	Cucharas river . . . . .	April 30, 1866	5.90	. . . . .	34.54	5	16
The Vasquez, <i>alias</i> John Browne Ditch . . . . .	Cucharas river . . . . .	May 1, 1866	3.50	. . . . .	40.44	6	17
The Hamlet Ditch . . . . .	Huerfano river . . . . .	May 1, 1866	3.80	. . . . .	43.94	13	17
The Woods Ditch . . . . .	Huerfano river . . . . .	May 1, 1866	.80	. . . . .	47.74	14	18
The Roy Ditch . . . . .	Huerfano river . . . . .	May 1, 1866	.70	. . . . .	48.54	15	19
The Jack Allen Ditch . . . . .	Huerfano river . . . . .	May 1, 1866	.80	. . . . .	49.24	16	20
The Baxter Pioneer Ditch . . . . .	Huerfano river . . . . .	May 3, 1866	1.30	. . . . .	50.04	17	21
The Chavez Ditch . . . . .	Huerfano river . . . . .	May 15, 1866	.80	. . . . .	51.34	18	22
The Francisco & Daigre Haujatala Ditch . . . . .	Cucharas river . . . . .	May 30, 1866	1.40	. . . . .	52.14	7	23
The Robert Rice Ditch . . . . .	Huerfano river . . . . .	Mar. 1, 1867	3	. . . . .	53.54	19	24
The Garcia Ditch . . . . .	Huerfano river . . . . .	April 25, 1867	7.10	. . . . .	56.54	20	25
The Baxter Pioneer Ditch, first enlargement . . . . .	Huerfano river . . . . .	May 1, 1867	.46	1.76	63.64	21	26
The Burns Ditch No. 2 . . . . .	Huerfano river . . . . .	May 31, 1867	.10	. . . . .	64.10	22	27
The Medina, <i>alias</i> Felipe, <i>alias</i> Naranjo and Archuleta Ditch . . . . .	Huerfano river . . . . .	June 1, 1867	4	. . . . .	64.20	23	28
The Sanchez Ditch . . . . .	Huerfano river . . . . .	July 15, 1867	.50	. . . . .	68.20	24	29
The Whitman & Mott Ditch . . . . .	Apache creek . . . . .	Aug. 31, 1867	.30	. . . . .	68.70	1	30
The Ballejos Ditch . . . . .	Cucharas river . . . . .	April 1, 1868	2	. . . . .	69	8	31

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Martinez Ditch.	Huerfano river.	April 10, 1868	.40	..	71	25	32
The Manzanara Ditch No. 1.	Huerfano river.	April 10, 1868	4	..	71.40	26	33
The Fernandez Ditch.	Huerfano river.	April 18, 1868	3.20	..	75.40	27	34
The Sefton Ditch No. 2.	Huerfano river.	April 20, 1868	1	..	78.60	28	35
The Upper Huerfano Ditch.	Huerfano river.	May 1, 1868	.40	..	79.60	29	36
The Ojo Ditch.	Cucharas river.	May 3, 1868	5	..	80	9	37
The Archuleta Ditch.	Huerfano river.	May 16, 1868	3.68	..	85	30	38
The Gomez Ditch.	Cucharas river.	June 8, 1868	3.20	..	88.68	10	39
The Forestine Ditch.	Santa Clara creek.	June 10, 1868	2	..	91.88	1	40
The Cullom Ditch.	Santa Clara creek.	June 10, 1868	.80	..	93.88	2	41
The Manzanara Ditch No. 2.	Huerfano river.	July 16, 1868	.70	..	94.68	31	42
The McCaskill Ditch.	Cucharas river.	Dec. 30, 1868	2	..	95.38	11	43
The Romero Ditch.	Cucharas river.	April 1, 1869	.80	..	97.38	12	44
The Ballejos Ditch, first enlargement.	Cucharas river.	April 1, 1869	2	4	98.18	13	45
The Mexican Ditch.	Cucharas river.	April 8, 1869	4.90	..	100.18	14	46

	Huerfano river . . . . .	Not stated	.10	.20	105.08	32	47
The Burns Ditch No. 2, first enlargement . . . . .	Huerfano river . . . . .	Not stated	5.60	6	105.18	33	48
The Upper Huerfano Ditch, first enlargement . . . . .	Huerfano river . . . . .	April 10, 1869	1.20	. . . . .	110.78	34	49
The Sefton Ditch No. 1 . . . . .	Huerfano river . . . . .	May 1, 1869	.40	1.20	111.98	35	50
The Jack Allen Ditch, first enlargement . . . . .	Santa Clara creek . . . . .	June 1, 1869	3	. . . . .	112.38	3	51
The Manrico Apodaca Ditch . . . . .	Santa Clara creek . . . . .	June 1, 1869	3.20	. . . . .	115.38	4	52
The A. M. Pryor Ditch . . . . .	Huerfano river . . . . .	June 15, 1869	2.40	. . . . .	118.58	36	53
The Vigil & Chavez Ditch . . . . .	Huerfano river . . . . .	April 6, 1870	2	. . . . .	120.98	37	54
The Pineda Ditch. . . . .	Huerfano river . . . . .	April 12, 1870	1.10	. . . . .	122.98	38	55
The Sisneros Ditch . . . . .	Apache creek . . . . .	April 25, 1870	6	. . . . .	124.08	2	56
The Zan Ditch . . . . .	Cucharas river . . . . .	May 10, 1870	3.20	. . . . .	130.08	15	57
The R. B. Willis Ditch . . . . .	Huerfano river . . . . .	May 15, 1870	.30	. . . . .	133.28	39	58
The Victor Ditch . . . . .	Cucharas river . . . . .	May 25, 1870	.40	. . . . .	133.58	16	59
The Trinidad Baca Ditch . . . . .	Huerfano river . . . . .	June 1, 1870	2	. . . . .	133.98	40	60
The May Ditch . . . . .	Santa Clara creek . . . . .	June 15, 1870	2.80	. . . . .	135.98	5	61
The Labrie Ditch . . . . .	Huerfano river . . . . .	April 1, 1871	2.68	. . . . .	138.78	41	62
The Harner Ditch. . . . .	Huerfano river . . . . .	April 6, 1871	6	. . . . .	141.46	42	63
The Palmer Ditch . . . . .	Cucharas river . . . . .	May 1, 1871	1.50	3	147.46	17	64
The Calf Pasture Ditch, first enlargement . . . . .	Santa Clara creek . . . . .	May 1, 1871	3.20	. . . . .	148.96	6	64
The Heury Schnlze Ditch . . . . .	Huerfano river . . . . .	May 3, 1871	1	. . . . .	152.16	43	65
The Jacquez Ditch . . . . .	Cucharas river . . . . .	May 11, 1871	.40	. . . . .	153.16	18	66
The Smith Crumley Ditch . . . . .	Huerfano river . . . . .	May 15, 1871	.70	. . . . .	153.56	44	67
The Meadow Ditch . . . . .							



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	No on stream	Order of priority in district
The Vasquez, <i>alias</i> John Brown Ditch, first enlargement	Cucharas river	May 20, 1871	2.30	5.80	154.26	19	68
The Denton Ditch	Cucharas river	June 1, 1871	.50		156.56	20	69
The Pedro Gomez Ditch, first enlargement	Huerfano river	June 1, 1871	1.22	1.54	157.06	45	69
The Graham Ditch	Apache creek	June 1, 1871	1		158.28	3	69
The Bradford & Swire Ditch	Huerfano river	June 6, 1871	1.04		159.28	46	70
The Duran Ditch	Cucharas river	June 12, 1871	.50		160.32	21	71
The David Hart Ditch	Cucharas river	June 15, 1871	.60		160.82	22	72
The Barnard & Alexander Ditch	Cucharas river	June 20, 1871	1.80		161.42	23	73
The Kincaid Ditch	Cucharas river	July 1, 1871	1		163.22	24	74
The Sanchez Ditch	Cucharas river	Mar. 15, 1872	.60		164.22	25	75
The Hicklin Ditch	Apache creek	April 1, 1872	4		164.82	4	76
The Bradford & Swire Ditch, first enlargement	Huerfano river	May 1, 1872	.30	1.34	168.82	47	77
The South Sandoval Ditch	Cucharas river	May 15, 1872	2		169.12	26	78
The Wilson Ditch	Huerfano river	May 20, 1872	.40		171.12	48	79
The Kincaid & Alexander Ditch							

The Z Half-Circle Ditch . . . . .	Cucharas river . . . . .	May 30, 1872	.20	. . . . .	173.22	28	81
The Ezekiel Gribble Ditch . . . . .	Cucharas river . . . . .	May 31, 1872	.40	. . . . .	173.42	29	82
The Gimlet Ditch . . . . .	Huerfano river . . . . .	June 8, 1872	.80	. . . . .	173.82	49	83
The Cucharas Ditch . . . . .	Cucharas river . . . . .	June 15, 1872	.50	. . . . .	174.62	30	84
The Beaver Dam Ditch . . . . .	Cucharas river . . . . .	June 25, 1872	1.20	. . . . .	175.12	31	85
The Caveniss Ditch . . . . .	Apache creek . . . . .	Jan. 1, 1873	.76	. . . . .	176.32	5	86
The North Veta Cañon Ditch . . . . .	Cucharas river . . . . .	Mar. 1, 1873	6	. . . . .	177.68	32	87
The Henry Strange Ditch . . . . .	Apache creek . . . . .	April 15, 1873	1.50	. . . . .	183.08	6	88
The Patterson Ditch . . . . .	Cucharas river . . . . .	April 20, 1873	5.10	. . . . .	184.58	33	89
The Cucharas Ditch, first enlargement . . . . .	Cucharas river . . . . .	April 25, 1873	1.50	2	189.68	34	90
The Medina, <i>alias</i> Felipe, <i>alias</i> Narango and Archuleta } Ditch, construction of lateral . . . . .	Huerfano river . . . . .	May 1, 1873	2.40	. . . . .	191.18	50	91
The José Maria Ditch . . . . .	Huerfano river . . . . .	May 1, 1873	.24	. . . . .	193.58	51	92
The Ojo Ditch . . . . .	Huerfano river . . . . .	May 25, 1873	2	. . . . .	193.82	52	93
The Spanish Peaks Ditch . . . . .	Cucharas river . . . . .	June 1, 1873	7.40	. . . . .	195.82	35	94
The Quillian Ditch . . . . .	Apache creek . . . . .	June 1, 1873	.40	. . . . .	203.22	7	94
The Denton & McAuliffe Ditch . . . . .	Cucharas river . . . . .	June 20, 1873	2	. . . . .	203.62	36	95
The Whitman & Mott Ditch, first enlargement . . . . .	Apache creek . . . . .	Sept 11, 1873	.30	.60	205.62	8	96
The Spider-web Ditch . . . . .	Huerfano river . . . . .	April 4, 1874	1.60	. . . . .	205.92	53	97
The John Harris Ditch, No. 1 . . . . .	Cucharas river . . . . .	April 20, 1874	1	. . . . .	207.52	37	98
The John Harris Ditch, No. 2 . . . . .	Cucharas river . . . . .	May 1, 1874	1	. . . . .	208.52	38	99
The L. D. R. D. Ditch . . . . .	Cucharas river . . . . .	May 10, 1874	.60	. . . . .	209.52	39	100
The Nate Patterson Ditch . . . . .	Cucharas river . . . . .	May 15, 1874	.70	. . . . .	210.12	40	101

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL.	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Ute Ditch . . . . .	Cucharas river . . . . .	May 15, 1874	1.50	. . . . .	210.82	41	102
The Vigil Ditch . . . . .	Cucharas river . . . . .	May 30, 1874	1.50	. . . . .	212.32	42	103
The Kruger Ditch . . . . .	Cucharas river . . . . .	June 11, 1874	1.20	. . . . .	213.82	43	104
The Deus Pioneer Ditch . . . . .	Huerfano river . . . . .	June 15, 1874	4	. . . . .	215.02	54	105
The Meser y Company Ditch . . . . .	Huerfano river . . . . .	June 15, 1874	3.20	. . . . .	219.02	55	106
The W. R. Willis Ditch . . . . .	Cucharas river . . . . .	Aug. 1, 1874	.50	. . . . .	222.22	44	107
The Palmer Ditch, first enlargement . . . . .	Huerfano river . . . . .	April 1, 1875	4	10	222.72	56	108
The South Side Ditch . . . . .	Huerfano river . . . . .	April 10, 1875	.20	. . . . .	226.72	57	109
The Dyer Ditch . . . . .	Cucharas river . . . . .	April 15, 1875	4.40	. . . . .	226.92	45	110
The Nate Patterson Ditch, first enlargement . . . . .	Cucharas river . . . . .	May 10, 1875	.30	1	231.32	46	111
The Lincoln Ditch . . . . .	Huerfano river . . . . .	June 1, 1875	.36	. . . . .	231.62	58	112
The Lincoln Ditch No. 2 . . . . .	Huerfano river . . . . .	June 1, 1875	.50	. . . . .	231.98	59	113
The Lincoln Ditch No. 3 . . . . .	Huerfano river . . . . .	June 1, 1875	.20	. . . . .	232.48	60	114
The McClure Ditch . . . . .	Huerfano river . . . . .	June 25, 1875	.50	. . . . .	232.68	61	115
The John G. Cozad Ditch . . . . .	Cucharas river . . . . .	June 25, 1875	1.40	. . . . .	233.18	47	115

The Lobato Ditch . . . . .	Cucharas river . . . . .	June 30, 1875	.70	. . . . .	234.58	48	116
The May Ditch, first enlargement . . . . .	Huerfano river . . . . .	Oct. 10, 1875	.10	2.10	235.28	62	117
The Vigil & Chavez Ditch, first enlargement . . . . .	Huerfano river . . . . .	April 1, 1863	.60	3	235.38	63	118
The Sportedors Ditch . . . . .	Santa Clara creek . . . . .	April 22, 1876	.60	. . . . .	235.98	7	119
The Sandoval Ditch . . . . .	Cucharas river . . . . .	May 1, 1876	1.50	. . . . .	236.58	49	120
The Glade Ditch . . . . .	Huerfano river. . . . .	May 15, 1876	2	. . . . .	238.08	64	121
The W. L. Murray Ditch . . . . .	Huerfano river . . . . .	June 1, 1876	.60	. . . . .	240.08	65	122
The Highland Ditch . . . . .	Cucharas river . . . . .	June 1, 1876	.80	. . . . .	240.68	50	122
The Carber Ditch . . . . .	Cucharas river . . . . .	May 15, 1877	.70	. . . . .	241.48	51	123
The Caldwell Ditch . . . . .	Huerfano river. . . . .	April 15, 1878	.30	. . . . .	242.18	66	124
The Hornback Ditch. . . . .	Huerfano river. . . . .	July 1, 1878	.40	. . . . .	342.48	67	125
The Stanley Ditch . . . . .	Huerfano river. . . . .	May 1, 1879	.32	. . . . .	242.88	68	126
The Robinson Ditch . . . . .	Huerfano river. . . . .	May 20, 1879	1	. . . . .	243.20	69	127
The Stoplín Ditch . . . . .	Cucharas river . . . . .	July 1, 1879	.40	. . . . .	244.20	52	128
The Sanchez Ditch, first enlargement . . . . .	Cucharas river . . . . .	April 1, 1880	1.40	2	244.60	53	129
The Pathfinder Ditch . . . . .	Huerfano river. . . . .	May 1, 1880	.50	. . . . .	246	70	130
The Meadow Ditch No. 2. . . . .	Huerfano river. . . . .	May 12, 1880	.80	. . . . .	246.50	71	131
The Denton & McAniff Ditch, first enlargement . . . . .	Cucharas river . . . . .	Mar. 30, 1881	.74	2.74	247.30	54	132
The Wayman <i>alias</i> Jim Gribble Ditch . . . . .	Cucharas river . . . . .	April 1, 1881	1.20	. . . . .	248.04	55	133
The Mosco Ditch. . . . .	Huerfano river . . . . .	April 15, 1881	.20	. . . . .	249.24	72	134
The Shields Ditch . . . . .	Huerfano river . . . . .	May 1, 1881	.30	. . . . .	249.44	73	135
The No. 1 Irrigating Ditch. . . . .	Huerfano river . . . . .	May 3, 1881	10	. . . . .	249.74	74	136

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The John George Ditch . . . . .	Cucharas river . . . . .	May 5, 1881	3.20	. . . . .	259.74	56	137
The Raymond M. y Valdez Ditch . . . . .	Huerfano river . . . . .	May 15, 1881	2.38	. . . . .	262.94	75	138
The Denton & McAuliffe Ditch, second enlargement . . . . .	Cucharas river . . . . .	Oct. 21, 1881	.26	3	265.32	57	139
The Raymond M. y Valdez Ditch, first enlargement . . . . .	Huerfano river . . . . .	April 10, 1881	1.42	3.80	265.58	76	140
The Dep Ditch . . . . .	Cucharas river . . . . .	May 12, 1882	.60	. . . . .	267	58	141
The South-Side Ditch . . . . .	Cucharas river . . . . .	June 10, 1882	.50	. . . . .	267.60	59	142
The Seville Ditch . . . . .	Huerfano river . . . . .	Sept. 30, 1882	.12	. . . . .	268.10	77	143
The Road No. 1 Ditch . . . . .	Huerfano river . . . . .	April 20, 1883	1.60	. . . . .	268.22	78	144
The Griddle & Baker Ditch . . . . .	Cucharas river . . . . .	May 1, 1883	.26	. . . . .	269.82	60	145
The Henry Strange Ditch, first enlargement . . . . .	Apache creek . . . . .	May 15, 1883	2	3.50	270.08	9	146
The Timothy Ditch . . . . .	Huerfano river . . . . .	June 1, 1883	.28	. . . . .	272.08	79	147
The Sharpsdale Ditch . . . . .	Huerfano river . . . . .	June 1, 1883	.12	. . . . .	272.36	80	148
The Lake Miriam Ditch . . . . .	Cucharas river . . . . .	Mar. 1, 1884	20	. . . . .	272.48	61	149
The Robinson Ditch, first enlargement . . . . .	Huerfano river . . . . .	Mar. 4, 1884	.50	1.50	292.48	81	150
The Madrid Ditch No. 2 . . . . .	Cucharas river . . . . .	Mar. 10, 1884	7.40	. . . . .	292.98	62	151

The Brooke Creek Ditch . . . . .	Huerfano river . . . . .	April 29, 1884	.80	. . . . .	300.38	82	152
The James Carey Ditch . . . . .	Huerfano river . . . . .	May 1, 1884	.60	. . . . .	301.18	83	153
The Samuel J. Capps Ditch . . . . .	Santa Clara creek . . . . .	June 1, 1884	.50	. . . . .	301.78	8	154
The Muddy Creek Ditch . . . . .	Huerfano river . . . . .	June 30, 1884	.80	. . . . .	302.28	84	155
The Oakfield Ditch . . . . .	Cucharas river . . . . .	July 15, 1884	.24	. . . . .	303.08	63	156
The Madrid Ditch . . . . .	Huerfano river . . . . .	May 15, 1886	.18	. . . . .	303.32	85	157
The Butte Valley Ditch, second enlargement . . . . .	Huerfano river . . . . .	May 15, 1886	3	6	303.50	86	158
The Sanchez Ditch, second enlargement . . . . .	Cucharas river . . . . .	May 20, 1886	2	4	306.50	64	159
The Martin Ditch No. 1 . . . . .	Cucharas river . . . . .	April 1, 1886	1.20	. . . . .	308.50	65	160
The James Carey Ditch, first enlargement . . . . .	Huerfano river . . . . .	June 15, 1886	2.90	3.50	309.70	87	161
The J. M. Murray Ditch . . . . .	Huerfano river . . . . .	July 1, 1886	1.50	. . . . .	312.60	88	162
The Fairview Ditch . . . . .	Cucharas river . . . . .	Mar. 10, 1887	.28	. . . . .	314.10	66	163
The Medina <i>alias</i> Felipa, <i>alias</i> Naraujo and Archuleta Ditch, } first enlargement of lateral . . . . .	Huerfano river . . . . .	April 10, 1887	.60	7.90	314.38	89	164
The J. M. Murray Ditch, first enlargement . . . . .	Huerfano river . . . . .	May 1, 1887	.50	1.50	314.98	90	165
The D. K. L. M. & P. Ditch . . . . .	Apache creek . . . . .	Nov. 2, 1887	8.60	. . . . .	315.48	10	166
The Mill Ditch . . . . .	Huerfano river . . . . .	Dec. 1, 1887	1.50	. . . . .	324.08	91	167
The Montez Ditch . . . . .	Huerfano river . . . . .	Jan. 2, 1888	37.64	. . . . .	325.58	92	168
The South Abeyta Highland Ditch . . . . .	Cucharas river . . . . .	Feb. 14, 1888	12.80	. . . . .	363.22	67	169
The Martinez Ditch, first enlargement . . . . .	Huerfano river . . . . .	Mar. 15, 1888	3.40	3.80	376.02	93	170
The Vigil & Chavez Ditch, second enlargement . . . . .	Huerfano river . . . . .	Mar. 20, 1888	.60	3.60	379.42	20	171
The Chavez Ditch, first enlargement . . . . .	Huerfano river . . . . .	Mar. 20, 1888	2.40	3.20	380.02	95	172
The Medina I. Felipa Ditch, second enlargement of lateral . . . . .	Huerfano river . . . . .	April 13, 1888	.90	7.90	382.42	96	173



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch	Cubic feet per second appropriated in and previously appropriated in district	No on stream	Order of priority in district
The Garcia Ditch, first enlargement . . . . .	Huerfano river . . . . .	May 4, 1888	6.90	14	383.32	97	174
The Spider Web Ditch, first enlargement . . . . .	Huerfano river . . . . .	May 15, 1888	.32	1.60	390.22	98	175
The Burns Ditch . . . . .	Huerfano river . . . . .	June 1, 1888	8.20	. . .	390.54	99	176
The Butte Ditch . . . . .	Chucharas river . . . . .	June 15, 1888	3	. . .	398.74	68	177
Total appropriated in division . . . . .	. . . . .	. . . . .	. . .	. . .	401.74		

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 16, GIVING THE DATE, ORDER OF PRIORITY AND AMOUNT OF EACH APPROPRIATION IN SAID DISTRICT, AS THE SAME HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE SIXTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF RESERVOIR	Name of stream from which water is taken	Name of ditch leading water thereto	Date of appropriation	Cubic feet of water decreed to each appropriation	Cubic feet previously appropriated in district	Order of priority in district
The Zan Ditch Reservoir . . . . .	Apache creek . . . . .	The Zan Ditch . . . . .	April 25, 1870	15,768	. . .	1
The K. and M. Reservoir . . . . .	Apache creek . . . . .	The D. K. L. M. & P. Ditch	Nov. 21, 1887	1,667,283	15,768	2

## STATEMENT CONCERNING DITCHES.

IN WATER DISTRICT NO. 16, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Gardner Ditch . . . . .	Huerfano river, . . . . .	Dec. 26, 1888	Feb. 17, 1888	18.55	. . . . . L. C. DeCamp <i>et al</i>
The Hayden Ditch . . . . .	Huerfano river, . . . . .	Jan. 19, 1889	Oct. 16, 1888	21.60	. . . . . D. T. Hayden
The Munro and Moore Ditch . .	Huerfano river, . . . . .	Jan. 21, 1889	Feb. 1, 1887	3.67	. . . . . Annie Munro
The Barela and Chavez Ditch . .	Sierra Rito de la Medio, . .	Mar. 26, 1889	Aug. 24, 1888	4.39	. . . . . José D. Barela and Rafael Chavez
The Ellis Ditch, . . . . .	Huerfano river, . . . . .	April 3, 1889	Dec. 12, 1888	22	. . . . . John J. and Mary K. Ellis
The M and S. Ditch, . . . . .	Apache creek . . . . .	June 8, 1889	April 24, 1889	12.10	. . . . . C. L. Millican and L. Stearns
The Place Ditch . . . . .	South Veta creek . . . . .	July 30, 1889	July 20, 1889	4.30	. . . . . Alonzo Place
The Welton Ditch, enlargement .	Huerfano river, . . . . .	April 22, 1890	Mar. 1, 1890	21	. . . . . Ludwig Kramer <i>et al</i>
The Armstrong Ditch, enlargement of the D. K. L. M. and P. }	Apache creek . . . . .	May 20, 1890	Feb. 21, 1890	3.25	. . . . . Charles E. Armstrong
The Willow Ditch . . . . .	North Arbata creek . . . .	July 29, 1890	April 28, 1890	8.41	. . . . . Thomas J. Arrington
The Aragon Ditch . . . . .	Chama creek, . . . . .	Aug. 13, 1890	. . . . . 1887	10	. . . . . José Aragon
The Garcia Ditch, . . . . .	Huerfano river, . . . . .	Aug. 19, 1890	. . . . . 1890	17	. . . . . Manuel A. Garcia
The John S. Patten Mexican Ditch	Pass creek . . . . .	Aug. 22, 1890	Mar. 8, 1883	16	. . . . . John S. Patten

# STATEMENT CONCERNING RESERVOIRS

40

IN DISTRICT No. 16, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Hayden Reservoir "A" . . . . .	Huerfano river. . . . .	Hayden Ditch . . . . .	Jan. 9, 1889	Oct. 16, 1888	56,810.60	. . . . . Daniel J. Hayden
The Hayden Reservoir "B" . . . . .	Huerfano river. . . . .	Hayden Ditch . . . . .	Jan. 9, 1889	Oct. 16, 1888	19,700.45	. . . . . Daniel J. Hayden
The Hayden Reservoir "C" . . . . .	Huerfano river. . . . .	Hayden Ditch . . . . .	Jan. 9, 1889	Oct. 16, 1888	50,000.00	. . . . . Daniel J. Hayden
The Hayden Reservoir "D" . . . . .	Huerfano river. . . . .	Hayden Ditch . . . . .	Jan. 9, 1889	Oct. 16, 1888	78,605.45	. . . . . Daniel J. Hayden
The M. & S. Reservoir No. 1 . . . . .	Apache creek . . . . .	M. & S. Ditch . . . . .	June 8, 1889	May 13, 1889	173,400.00	. . . . . C. L. Williams <i>et al</i>
The M. & S. Reservoir No. 2 . . . . .	Apache creek . . . . .	M. & S. Ditch . . . . .	June 8, 1889	May 13, 1889	264,000.00	. . . . . C. L. Williams <i>et al</i>
The M. & S. Reservoir No. 3 . . . . .	Apache creek . . . . .	M. & S. Ditch . . . . .	June 8, 1889	May 14, 1889	327,800.00	. . . . . C. L. Williams <i>et al</i>
The M. & S. Reservoir No. 4 . . . . .	Apache creek . . . . .	M. & S. Ditch . . . . .	June 8, 1889	May 14, 1889	271,700.00	. . . . . C. L. Williams <i>et al</i>
The M. & S. Reservoir No. 5 . . . . .	Apache creek . . . . .	M. & S. Ditch . . . . .	June 8, 1889	April 15, 1889	140,300.00	. . . . . C. L. Williams <i>et al</i>
The Place Reservoir . . . . .	South creek . . . . .	Place Ditch . . . . .	July 30, 1889	July 20, 1889	860,000.00	. . . . . Alonzo Place
The Willow Reservoir . . . . .	N. Abeta creek . . . . .	Willow Ditch . . . . .	July 29, 1890	April 28, 1890	3,822,325.00	. . . . . Thomas J. Arrington

STATE ENGINEER.

313

*Water District No. 17*—Geo. Peck, Commissioner,  
Las Animas, Colorado.

Mr. Peck reports nine canals, having an aggregate length of 305 miles; that 293,705 acres can be irrigated therefrom; that there were irrigated in alfalfa 17,981 acres; in seeded grasses 122 acres; in natural grasses 7,810 acres; in other crops, including fruit, 19,309 acres; and that 780 acres were irrigated from seepage, giving a total of 46,002 acres irrigated. Of the above amount 410 acres were in melons.

The statement does not include all ditches taking water in the district.

# COMMISSIONER'S REPORT, A. D. 1890.

DIVISION NO. 2—DISTRICT NO. 17.

## NAME OF DITCH.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein, approximate	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom in this district, approximate	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom, approximate	Number of acres of other crops irrigated therefrom, and fruit	Number of acres irrigated from seepage
The Ark. River Land, Reservoir & Canal Co. . .	113	215	535.×	40,600	8,321	122	1,000	7,966	400
The Jones Ditch . . . . .	12	195	75	1,920	420	. . .	800	215	100
The Riverside Ditch . . . . .	9	180	40	2,380	350	. . .	600	470	. . .
The Town Ditch, W. Animas . . . . .	10	190	35	2,000	190	. . .	400	180	. . .
* The Rocky Ford Ditch . . . . .	16	215	250	11,150	3,400	. . .	2,510	2,058	280
* The Catlin Ditch . . . . .	est. 35	215	300	13,335	4,000	. . .	1,500	7,165	. . .
The Catlin Ditch, Fairmount extension . . . .	est. 10	215	80	8,000	1,300	. . .	1,000	1,255	. . .
The Otero Ditch, new . . . . .	est. 100	No	water yet	28,320	. . .	. . .	. . .	. . .	. . .
† The Bob Creek Ditch . . . . .	. . .	. . .	. . .	186,000	. . .	. . .	. . .	. . .	. . .
Totals in district . . . . .	305	. . .	1,315	293,705	17,981	122	7,810	19,309	780

\* Included before melon acreage, 260. \* Included before melon acreage, 150.

† Taken from Company's plat.

† Total number of acres irrigated, 46,002.

The ditches named in Engineer's Report, 1888, not included. They are seventy-five miles away and Commissioner did not have time to go there.



No Water Commissioners have been appointed for Districts Nos. 18, 49, 66 and 67.

In District No. 19, three different Water Commissioners have been appointed, J. F. Roney, of Trinidad, being the last. There is no report from this district.

## STATEMENT CONCERNING DITCHES

IN DISTRICT NO. 17. RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL.	Stream from which water is diverted	Date of filing in State Engineer's office	Date of com- mencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Rocky Ford Ditch, enlargement	Arkansas river.	Sept. 4, 1889	Jan. 22, 1889	206	..... The Rocky Ford Ditch Company
The Riverside Ditch	Arkansas river.	Jan. 27, 1890	Dec. 5, 1887	80	..... The Riverside Ditch Company
The Horse Creek Ditch	Horse creek	Feb. 13, 1890	Dec. 8, 1888	55	..... S. O. Henry
The Jones Ditch.	Arkansas river.	Feb. 13, 1890	Mar. 1885	122.50	..... The Jones Ditch Company
The J. W. Potter Ditch	Arkansas river.	Feb. 24, 1890	Nov., 1881	10	..... J. W. Potter
The Crooked Aroyo Ditch	Crooked arroyo.	Mar. 1, 1890	May 10, 1889	3.23	..... T. J. Howard <i>et al.</i>
The Adobe Canal	Adobe creek	Mar. 24, 1890	Feb. 25, 1890	800	..... Henry R. Holbrook
The Horse Creek Canal	Horse creek	Mar. 24, 1890	Mar. 1, 1890	800	..... Henry R. Holbrook
The Rocky Ford Canal, Reser- voir, Land Loan and Trust Company's Canal	Arkansas river.	Mar. 31, 1890	Oct. 19, 1889	618	{ The Rocky Ford Canal, Reservoir, Land, Loan and Trust Company.
The Rocky Ford Ditch, amended statement	Arkansas river.	May 6, 1890	Sept. 30, 1887	199.80	..... The Rocky Ford Ditch Company

## STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT NO. 17, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Lake Canal Reservoir No. 1 . . . .	Arkansas river. . .	Lake canal. . . .	June 14, 1890	March, 1890	Not given	. . . Henry R. Holbrook
The Lake Canal Reservoir No. 2 . . . .	Arkansas river. . .	Lake canal. . . .	June 14, 1890	March, 1890	Not given	. . . Henry R. Holbrook
The Lake Canal Reservoir No. 3 . . . .	Arkansas river. . .	Lake canal. . . .	June 14, 1890	March, 1890	Not given	. . . Henry R. Holbrook

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 18, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The McLaughlin Apishapa Ditch .	Apishapa river . .	Dec. 18, 1888	March, 1886	10	. . . . . B. Franklin McLaughlin
The Salado Ditch . . . . .	Salado gulch . . . .	Feb. 7, 1889	Apr. 13, 1886	37.68	. . . . . Luis, Felix and Tacundo Baca
The Baca Brothers Ditch . . . .	Apishapa river . .	Feb. 7, 1889	{ May, 1872 { March, 1881	1.58 } 7.54 }	. . . . . Luis, Felix and Tacundo Baca
The Cordova Irrigating Ditch . . .	Apishapa river . .	Oct. 2, 1890	. . . . 1873	.66	. . . . . Benito Cordova

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 19, GIVING THE DATE, ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, SO FAR AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE THIRD JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district.	No. on stream	Order of priority in district
The Riley & Duntou Ditch . . . . .	Purgatoire river . . . . .	May, 1863	13.40	. . . . .	. . . . .	1	1
The McCormack Ditch . . . . .	Purgatoire river . . . . .	April 1, 1864	34.25	. . . . .	43.40	2	2
The Lewelling Ditch . . . . .	Purgatoire river . . . . .	Spring, 1865	23.25	. . . . .	47.65	3	3
The Hohene Ditch . . . . .	Purgatoire river . . . . .	Mar. 12, 1866	62.15	. . . . .	70.90	4	4
The Phelps Ditch . . . . .	Purgatoire river . . . . .	April, 1866	7	. . . . .	133.05	5	5
The Burnes & Duncan Ditch . . . . .	Purgatoire river . . . . .	April 8, 1866	10.85	. . . . .	140.15	6	6
The Benjamin McGalliard Ditch . . . . .	Purgatoire river . . . . .	April, 1867	7.50	. . . . .	150.90	7	7
The Cherevoy Ditch . . . . .	Purgatoire river . . . . .	June, 1867	5.10	. . . . .	158.40	8	8

The Aramanta Ditch . . . . .	Purgatoire river . . . . .	Spring, 1868	6	. . . . .	163.50	9	9
The South Side Ditch, original construction . . . . .	Purgatoire river . . . . .	Feb. 17, 1876	33	. . . . .	169.50	10	10
±The South Side Ditch, enlargement . . . . .	Purgatoire river . . . . .	. . . . .	15.45	. . . . .	202.50	11	11
Total in district . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	217.95		

No other decrees have been rendered in this district.

The capacities given are the theoretical capacities, computed from dimensions and grade.



## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 19, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Salas North Ditch . . . . .	Purgatoire river . .	Feb. 2, 1889	April, 1866	12.94	E. S. Bell <i>et al</i>
The Salas South Ditch . . . . .	Purgatoire river . .	Feb. 2, 1889	Feb., 1869	18.90	E. S. Bell <i>et al</i>
The Chicosa Ditch . . . . .	Purgatoire river . .	Feb. 13, 1889	June 21, 1886	43	The Chicosa Irrigating Ditch Company
The Jas. McBride Ditch . . . . .	San y Cidro creek . .	Feb. 25, 1889	May, 1885	2.50	James McBride
The South Side Ditch . . . . .	Purgatoire river . .	May 17, 1889	Feb 17, 1876	45	The South Side Irrigating Ditch Company
The South Side Ditch, first enlarg	Purgatoire river . .	May 17, 1889	Feb. 1, 1877	6	The South Side Irrigating Ditch Company
The South Side Ditch, second enlarg	Purgatoire river . .	May 17, 1889	Mar. 1, 1882	13	The South Side Irrigating Ditch Company
The South Side Ditch, third enlarg	Purgatoire river . .	May 17, 1889	Mar. 1, 1888	21	The South Side Irrigating Ditch Company
The Florida Ditch . . . . .	Purgatoire river . .	May 17, 1889	April 7, 1877	22	The Florida Irrigating Ditch Company
The Florida Ditch, first enlargement	Purgatoire river . .	May 17, 1889	Jan. 10, 1878	15	The Florida Irrigating Ditch Company
The Sandoval Ditch . . . . .	Purgatoire river . .	May 17, 1889	Nov. 23, 1883	22	The Sandoval Irrigating Ditch Company
The Sandoval Ditch, first enlarg	Purgatoire river . .	May 17, 1889	Feb. 15, 1888	12	The Sandoval Irrigating Ditch Company
The Chicosa Ditch . . . . .	Purgatoire river . .	June 15, 1889	June 21, 1886	44	The Chicosa Irrigating Ditch Company
The Chicosa Ditch, first enlargement	Purgatoire river . .	June 15, 1889	Mar. 18, 1889	34.80	The Chicosa Irrigating Ditch Company

The Pioneer Ditch . . . . .	Gray creek . . . . .	Sept. 20, 1889	Feb. 15, 1882	13.90	. . . . . H. J. Niles
The Pioneer Ditch, first enlarged	Gray creek . . . . .	Sept. 20, 1889	April 15, 1886	6.57	. . . . . H. J. Niles
The Trinidad Water Works } Company Ditch . . . . . }	Purgatoire river . . . . .	Jan. 2, 1890	Sept. 30, 1889	31	. . . . . The Trinidad Water Works Company
The King Ditch . . . . .	N.F. Purgatoire river	Aug. 16, 1890	Aug. 7, 1890	28	. . . . . The King Ditch Company

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT No. 19, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The King Ditch Co.'s Reservoir	N fork Las Animas .	King ditch . . . .	Aug. 16, 1890	Aug. 17, 1890	13,454,000	. . . The King Ditch Company

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 49, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Shepard & Cook Ditch. . . .	Republican river. . . . .	April 13, 1889	Jan. 29, 1889	40	.. Samuel C. Shepard and James E. Cook
The James E. Cook Ditch. . . . .	Republican river. . . . .	April 23, 1889	Feb. 5, 1889	40	James E. Cook
The Tip Jack Ditch. . . . .	Republican river. . . . .	April 24, 1889	Feb. 8, 1889	11	Abner W. Spencer
The Tip Jack Ditch No. 2. . . . .	Republican river. . . . .	April 24, 1889	Feb. 9, 1889	11	Abner W. Spencer

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 66, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Rupert Ditch No. 1 . . . . .	East Carriso creek. . . . .	June 24, 1889	Mar. 25, 1889	6.12	. . . . . H. J. Rupert and H. M. Tinker
The Rupert Ditch No. 2 . . . . .	East Carriso creek. . . . .	June 24, 1889	Mar. 25, 1889	6.12	. . . . . H. J. Rupert and H. M. Tinker

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 67, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office.	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Seven Bar Ditch . . . . .	Caddoa creek . . .	April 9, 1888	Feb. 1, 1888	32	. . . . . G. M. Woodworth
The Phillips Ditch . . . . .	Big Sandy creek . .	Dec. 12, 1888	Sept. 15, 1888	11	. . . . . Ivory Phillips
The Phillips Ditch No. 2 . . . . .	Big Sandy creek . .	Dec. 12, 1888	Sept. 15, 1888	11	. . . . . Ivory Phillips
The Buffalo Creek Ditch . . . . .	Arkansas river. . . .	Jan. 11, 1889	Jan. 10, 1885	104.49	. . . . . The Buffalo Creek Irrigation Company
The A. R. Black Home Ranch Ditch . . . . .	Arkansas river. . . .	Mar. 6, 1889	Nov. 4, 1886	Not given	. . . . . A. R. Black
The A. R. Black Manor Ditch . . . . .	Arkansas river. . . .	Mar. 6, 1889	April 16, 1887	Not given	. . . . . A. R. Black
The Bedrock Mutual Ditch . . . . .	Arkansas river. . . .	June 6, 1889	Mar. 4, 1889	26.22	. . . . . The Bedrock Mutual Ditch Company
The X. Y. Irrigating Ditch. . . . .	Arkansas river. . . .	Oct 10, 1889	Aug. 12, 1889	104.50	. . . . . The X. Y. Irrigating Ditch Company
The Williams-Clowes Ditch. . . . .	Big Sandy creek. . . .	Oct. 30, 1889	Aug. 1, 1889	10	. . . . . J. W. Williams and William Clowes
The Bagdad Ditch . . . . .	Big Sandy creek . . .	Dec. 4, 1889	Sept. 6, 1889	17	. . . . . Charles G. Straug
The H. H. Metcalf Ditch . . . . .	Big Sandy creek . . .	Dec. 18, 1889	Oct. 1, 1889	500	. . . . . Henry H. Metcalf
The Lincoln County Ditch. . . . .	Big Sandy creek . . .	Feb. 1, 1890	Nov. 10, 1889	1,600	The Lincoln County Ditch, Reservoir & Land Co.
The Agate Ditch . . . . .	Godfrey gulch . . . .	Feb. 14, 1890	July 30, 1888	2,700	. . . . . Alexander V. Scherrier
The Sisson Irrigating Ditch (A) . . . . .	Arkansas river. . . .	Mar. 14, 1890	Dec. 20, 1889	Not given	. . . . . The Sisson Irrigating Ditch Company



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Sisson Irrigating Ditch (B)	Arkansas river. . .	Mar 14, 1890	Dec. 20, 1889	Not given	. . . . . The Sisson Irrigating Ditch Company
The Amity Canal . . . . .	Arkansas river. . .	Mar. 25, 1890	Mar. 7, 1887	850	. . . . . The Amity Canal and Reservoir Company
The Sisson Irrigating Ditch No. 1	Arkansas river. . .	May 2, 1890	Dec. 20, 1889	61	. . . . . The Sisson Irrigating Ditch Company
The Sisson Irrigating Ditch No. 2	Arkansas river. . .	May 2, 1890	Dec. 20, 1889	61	. . . . . The Sisson Irrigating Ditch Company
The Midland Canal, first division	Arkansas river. . .	May 13, 1890	Feb. 15, 1890	196	. . . . . The Midland Canal, Reservoir and Land Co.
The Luke Cahill Gageby C'k Ditch	Gageby creek	May 14, 1890	Feb. 24, 1890	15	. . . . . Luke Cahill
The Bent Ditch . . . . .	Big Sandy river . .	May 21, 1890	Feb. 1, 1890	25	. . . . . John A. Bent
The Lincoln County Water Sup- ply & Land Co.'s Ditch . . . . .	Big Sandy creek . .	July 10, 1890	Nov. 10, 1889	1,600	The Lincoln County Water Supply and Land Co.
The Hugo Ditch. . . . .	Big Sandy creek . .	July 10, 1890	May 1, 1889	34	. . . . . A. K. Clark
The Colorado and Kansas Canal.	Arkansas river. . .	July 21, 1890	(Oct. 12, 1885	650	. . . . . The Colorado & Kansas Canal & Reservoir Co.
			{ Nov. 15, 1889	900	. . . . . As enlarged
The Bedrock Mutual Ditch, enlarg.	Arkansas river. . .	Aug. 12, 1890	Jan., 1890	54	. . . . . The Bedrock Mutual Ditch Company
The Lamar Land & Canal Co.'s Canal . . . . .	Arkansas river. . .	Oct. 9, 1890	July 16, 1890	50	. . . . . The Lamar Land and Canal Company
The Mauvel Canal . . . . .	Arkansas river. . .	Oct. 15, 1890	April 30, 1890	169	The Mauvel Canal, Reservoir & Improvement Co

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 67, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Lincoln County reservoir . . . . .	Big Sandy creek	Lincoln county	Feb. 1, 1890	Nov. 10, 1889	200,000,000	{ The Lincoln Co. Ditch, Reservoir & Land Co.
The Agate Reservoir . . . . .	Godfrey gulch .	Agate . . . . .	Feb. 14, 1890	July 30, 1888	104,485,920	. Alexander B. Scherrer
The Lincoln County Reservoir, additional statement . . . . .	Big Sandy creek	Lincoln county	July 10, 1890	Nov. 10, 1889	200,000,000	{ The Lincoln Co. Water Supply & Land Co.
The Hugo Reservoir . . . . .	{ Big Sandy c'k, Barron draw .	{ Hugo . . . . .	July 10, 1890	May 1, 1889	6,630,000	. . . . . A. K. Clarke

RIO GRANDE DIVISION No. 3.

---

H. J. L. WARREN, SUPERINTENDENT, ALAMOSA.

The rapid advancement made in the agricultural development of the San Luis Valley, within the past two years, renders this division one of the most important in the State, and it is to be regretted that no report whatever has been made by the Superintendent.

This is doubtless partially due to the fact that the water rights of the division have not been adjudicated, except as to two districts, and those but recently, and that consequently the Water Commissioners have not been in active service sufficiently to collect the necessary data.

The Superintendent's register not having been returned to this office, it is also impossible to give a tabulated statement of the ditches of such districts as have adjudicated their water rights.

---

*Water District No. 20*—W. R. Neale, Commissioner, Alamosa. No report.

# STATEMENT CONCERNING DITCHES

IN DISTRICT NO. 20, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Bellows Creek Ditch No. 1 . . . . .	E. Fork Bellows creek .	Dec. 11, 1888	Not given	12	. . . . . George W. Thorne <i>et al</i>
The Bellows Creek Ditch No. 2 . . . . .	Bellows creek . . . . .	Dec. 11, 1888	Not given	18	. . . . . George W. Thorne <i>et al</i>
The Bellows Creek Ditch No. 3 . . . . .	Bellows creek . . . . .	Dec. 11, 1888	Not given	4	. . . . . George W. Thorne
The Bellows Creek Ditch No. 4 . . . . .	Bellows creek . . . . .	Dec. 11, 1888	Not given	3	. . . . . George W. Thorne
The Piños Creek Ditch No. 1 . . . . .	Piños creek . . . . .	Dec. 18, 1888	June 1873	25	. . . . . J. W. Janison <i>et al</i>
The Todd Ditch . . . . .	Cherry creek . . . . .	Jan. 2, 1889	June 1883	3	. . . . . John Todd
The Hosseklus Ditch . . . . .	Rio Grande river . . . .	Jan. 3, 1889	Oct. 10, 1888	10	. . . . . J. J. Hosseklus
The South Fork High Line Ditch . . . . .	S. fork Rio Grande riv.	Feb. 20, 1889	Nov. 15, 1885	22	. . . . . A. M. Rice <i>et al</i>
The Egan Ditch No. 1 . . . . .	Francisco creek . . . .	Feb. 28, 1889	June 1877	2	. . . . . Philo Egan
The Egan Ditch No. 2 . . . . .	Francisco creek . . . .	Feb. 28, 1889	June 1887	1.50	. . . . . Philo Egan
The Egan Ditch No. 3 . . . . .	Francisco creek . . . .	Feb. 28, 1889	May 20, 1886	4	. . . . . Philo Egan
The Cemetery Ditch, enlargement . . . . .	Francisco creek . . . .	Feb. 28, 1889	May 20, 1886	2	. . . . . Philo Egan
The Del Norte Canal . . . . .	Rio Grande river . . . .	Mar. 2, 1889	Mar. 13, 1881	2,540	. . . The Del Norte Land and Canal Co
The Patten Ditch . . . . .	Farmers' creek . . . . .	May 6, 1889	April 13, 1889	6	. . . . . Arthur K. Patten

## STATEMENT CONCERNING DITCHES—Continued.

IN DISTRICT NO. 20, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Citizens' Ditch, amended statement.	Rio Grande river . . . .	May 23, 1889	Mar. 1, 1882	1,040	The Monte Vista Canal Company
The Anderson Arroyo Ditch No. 1 . . .	Arroyo unnamed. . . .	May 25, 1889	May 1, 1887	4	Swan Anderson
The Anderson Arroyo Ditch No. 2 . . .	Arroyo unnamed. . . .	May 25, 1889	Nov. 15, 1888	4.50	Swan Anderson
The Cemetery Ditch. . . . .	Francisco creek . . . .	June 1, 1889	May 15, 1886	1.50	The Town of Del Norte
The James McCleary Ditch. . . . .	Francisco creek . . . .	June 1, 1889	April 14, 1874	4	Asa F. Middaugh
The Rio Grande Ditch No. 4 . . . . .	Rio Grande river. . . .	June 5, 1889	May 3, 1886	65	Dyer & Ladd <i>et al</i>
The Farmers' Creek Ditch . . . . .	Farmers' creek. . . . .	June 13, 1889	April 4, 1888	5	C. Eliza Wason
The Hubbard Ditch . . . . .	Rio Grande river. . . .	Aug. 12, 1889	April 5, 1882	25.50	Alonzo Hubbard <i>et al</i>
The Centennial Ditch. . . . .	Rio Grande river. . . .	Aug. 13, 1889	April 25, 1874	110.90	The Centennial Ditch Company
The Centennial Ditch, first enlargement.	Rio Grande river. . . .	Aug. 13, 1889	July 5, 1876	68.50	The Centennial Ditch Company
The Centennial Ditch, second enlargement	Rio Grande river. . . .	Aug. 13, 1889	Sept. 1, 1882	85.60	The Centennial Ditch Company
The Cole Ditch No. 1. . . . .	Rock creek. . . . .	Aug. 13, 1889	Oct. 1, 1875	3	Herschel B. Smith
The Cole Ditch No. 1, enlargement & extend.	Rock creek. . . . .	Aug. 13, 1889	May 1, 1889	4	Herschel B. Smith
The Muller Ditch . . . . .	Seepage water . . . .	Aug. 26, 1889	April 15, 1885	1.50	Gottlieb Muller

The Smith Ditch, extension . . . . .	Rock creek . . . . .	Aug. 26, 1889	1883, '84, '88	5.50	. . . . . Gottlieb Muller
The Lemke Ditch . . . . .	{ Rio Grande through } { the Del Norte canal }	Sept. 17, 1889	Mar. 1, 1888	2.70	. . . . . Reynold Lemke
The Costilla Ditch . . . . .	Rio Grande river . . . . .	Sept. 23, 1889	Mar. 1, 1886	300	. . . . . The Costilla Ditch Co
The Monte Vista Canal, feeder for . . . . .	Rio Grande river . . . . .	Oct. 14, 1889	Sept. 20, 1889	8.88	. . . . . The Monte Vista Canal Co
The Deltrich & La Cas Ditch . . . . .	Rio Grande river . . . . .	Oct. 18, 1889	Aug. 9, 1886	28.09	. . . . . Adam K. Deitrich
The Monte Vista Canal, additional statement . . . . .	Rio Grande river . . . . .	Oct. 24, 1889	Not given	1,200	. . . . . The Monte Vista Canal Co
The Rio Grande & Piedra Valley Ditch . . . . .	Rio Grande river . . . . .	Nov. 4, 1889	Oct. 5, 1876	153	{ The Rio Grande & Piedra Valley { Ditch Co
The Spring Ranch Ditch . . . . .	Rio Grande river . . . . .	Nov. 20, 1889	April 20, 1888	22	. . . . . Arthur K. Patten
The Marr jo Ditch . . . . .	Rio Grande river . . . . .	Nov. 25, 1889	April 15, 1882	7.50	. . . . . Nels Persson <i>et al</i>
The Riverside Ditch . . . . .	Rio Grande river . . . . .	Dec. 12, 1889	April 20, 1887	3.70	. . . . . James Van Pelt <i>et al</i>
The Stonewall Ditch . . . . .	Rio Grande river . . . . .	Feb. 4, 1890	Jan. 23, 1890	215	. . . . . The Stonewall Land & Canal Co
The Arroyo Ditch . . . . .	Rock creek . . . . .	Feb. 10, 1890	July, 1884	26.04	. . . . . John F. Anderson <i>et al</i>
The San Luis Canal, amended and further statement . . . . .	Rio Grande river . . . . .	Feb. 11, 1890	Sept. 11, 1883	1,500	{ The San Luis Land, Canal & Im- { provement Co
The San Luis Canal, feeder No. 1 . . . . .	Rio Grande river . . . . .	Feb. 11, 1890	April 30, 1888	3,000	{ The San Luis Land, Canal & Im- { provement Co
The San Luis Canal, feeder No. 2 . . . . .	Rio Grande river . . . . .	Feb. 11, 1890	April 30, 1888	3,000	{ The San Luis Land, Canal & Im- { provement Co
The Kenilworth Canal, amended and further statement . . . . .	Rio Grande river . . . . .	Feb. 20, 1890	Feb. 7, 1890	600	. . . . . The Kenilworth Canal Co
The Brey Ditch . . . . .	Rio Grande river . . . . .	Mar. 15, 1890	Aug. 15, 1888	7	. . . . . J. A. Brey
The Hosselkus Ditch, enlargement . . . . .	Rio Grande river . . . . .	Mar. 24, 1890	Feb., 1890	7	. . . . . Rudolph Knoblauch
The Anaconda Ditch . . . . .	Rio Grande river . . . . .	May 12, 1890	Feb. 15, 1890	18	. . . . . Tunis V. Wilson <i>et al</i>
The East Aqua Ramon Ditch . . . . .	Aqua Ramon creek . . . . .	June 3, 1890	May 29, 1890	5	. . . . . John Beiger
The Aqua Ramon Ditch, enlargement . . . . .	Aqua Ramon creek . . . . .	June 3, 1890	May 29, 1890	5	. . . . . John Beiger



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Bellows Creek Ditch No. 5 . . . . .	Bellows creek . . . . .	July 29, 1890	May 30, 1890	22	. . . . . George W. Thorne
The Bellows Creek Ditch No. 6 . . . . .	Bellows creek reservoir	July 29, 1890	May 3, 1890	20.30	. . . . . George W. Thorne
The Empire Canal Extension . . . . .	Rio Grande river . . . . .	Aug. 14, 1890	July 1, 1889	Not given	. . . . . The Empire Land & Canal Co
The Empire Canal, amended, further and corrected statement of . . . . .	Rio Grande river . . . . .	Nov. 4, 1860	April, 1882	2,333.10	. . . . . The Empire Land & Canal Co

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 20, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Bellows Creek Reservoir No 1 . . . . .	Bellows creek . . . . .	{ BellowsCreekDitch } { No 5 . . . . . }	July 29, 1890	May 3, 1890	1,000,000	. . . . . George W. Thorne

## STATEMENTS CONCERNING ARTESIAN WELLS

IN WATER DISTRICT No. 20, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL.	Total depth thereof in feet	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
Chas. Glynn	200	3	43	83	...	...	...	Sec. 14, T. 36 N., R. 9 E.	22½	...
Alamosa Town Co	850	...	...	...	...	...	...	Sec. 10, T. 37 N., R. 10 E.	1000	Temperature about 65°
Charles Ottway	171	3	45	140	171	...	...	Sec. 10, T. 37 N., R. 10 E.	5	First flow 45, second flow 46
* C. Bucher	1,000	7½ 6	45 932	...	...	...	...	Sec. 10, T. 37 N., R. 10 E.	...	...
J. W. Hill	140	3	95	140	...	...	...	Sec. 23, T. 37 N., R. 10 E.	10	Temperature 50°
W. O. Cyle	225	3	55	127	165	217	...	Sec. 13, T. 38 N., R. 9 E.	25	...
One at Zapato	241	...	...	...	...	...	...	Sec. 17, T. 40 N., R. 12 E.	1	...

\* Flow never measured. Pressure twenty-five pounds to the inch. About ten big flows of water struck, and there is a flow coming up between the two casings. Temperature of lowest flow 75° F. Contains no sulphur. Just as pure as can be had in Colorado.

# STATEMENT CONCERNING DITCHES

43

IN WATER DISTRICT NO. 21, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Bennett Creek Ditch . . . .	Bennett creek . . . .	Jan. 2, 1889	April, 1875	12	John Todd <i>et al</i>
The Heiselt Ditch . . . . .	Ojo de Laguna . . . .	Aug. 7, 1889	May 10, 1889	14	Hyrum Heiselt
The Norland Ditch, first enlargement	Alamosa river . . . .	Aug. 12, 1889	July 9, 1889	10	Holland Meyers and J. M. Waldron
The L. D. Eskridge Ditch . . . .	Aroilla creek . . . .	Aug. 17, 1889	May 22, 1889	18	L. D. Eskridge
The John Sumner Irrigation Ditch	Alamosa river . . . .	Aug. 26, 1889	June 21, 1889	26	John Sumner <i>et al</i>
The South Side Seepage Ditch	Seepage water . . . .	Aug. 27, 1889	May 30, 1889	10	F. R. and E. G. Miller
The Lovett and Garrett Ditch . .	Alamosa river . . . .	Sept. 3, 1889	July 1, 1889	10	Geo. S. Lovett
The Frank C. Games Ditch . . .	Alamosa river . . . .	Nov. 1, 1889	May 1, 1889	3.67	Frank C. Games
The Spencer Ditch . . . . .	Not stated . . . . .	Dec. 13, 1889	May 15, 1875	1.30	Morgan Spencer
The Brazo Del Norte Ditch . . .	Conejos river . . . .	Mar. 29, 1890	Mar. 25, 1889	20.40	F. M. Gilchrist <i>et al</i>
The Keystone Ditch . . . . .	La Jara creek . . . .	May 22, 1890	Feb. 25, 1890	180	Silas F. Newcomb
The Nate Garrett Ditch, second enlargement	La Jara river . . . .	July 3, 1890	May 20, 1890	11.55	Cornelia C. Flintham

## STATEMENT CONCERNING ARTESIAN WELLS

IN WATER DISTRICT NO. 21, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF OWNER OF WELL	Total depth thereof	Diameter of case in inches	Length of case in feet	DEPTH OF FLOW BELOW SURFACE				LOCATION	Present flow in gallons, per minute	REMARKS
				First flow	Second flow	Third flow	Fourth flow			
S. E. Newcomb, 8 wells . . . . .	{ 100 to 175 }	All 3	36	60	150	. . .	. . .	{ (Sec. 1 } T. 35 N., R. 9 E., and } Sec. 2 } N. M. P. M. . }	{ 60 to 125 }	. . . . .
John C. Games . . . . .	110	2	48	85	110	. . .	. . .	Sec. 15, T. 35 N., R. 9 E. . .	10	. . . . .
La Jara Town Company . . . . .	110	3	56	85	95	110	. . .	Sec. 15, T. 35 N., R. 9 E. . .	10	. . . . .
Thos Ornaud . . . . .	56	3	20	. . .	. . .	. . .	. . .	Sec. 27, T. 35 N., R. 9 E. . .	250	. . . . .
Marsh, 8 2-inch wells . . . . .	{ 109 to 135 }	. . .	. . .	. . .	. . .	. . .	. . .	Sec. 31, T. 38 N., R. 8 E. . .	. . .	{ Raised water 18 feet above top of well tubing.
C. C. Carrico . . . . .	84	2	48	85	. . .	. . .	. . .	Sec. 11, T. 36 N., R. 9 E. . .	1	Temperature, first flow, 45°
Empire L. & C. Company . . . . .	80	2	38	80	. . .	. . .	. . .	Sec. 7, T. 36 N., R. 10 E. . .	8	Temperature, first flow, 45°
La Jara Creamery Co. . . . .	120	3	40	85	95	120	. . .	Sec. 29, T. 36 N., R. 10 E. . .	8	Temperature, all flows, 45°
Empire L. & C. Co. . . . .	71	2	37	71	. . .	. . .	. . .	Sec. 5, T. 36 N., R. 10 E. . .	4	Temperature, first flow, 45°
La Jara Creamery Co. . . . .	85	3	46	85	. . .	. . .	. . .	Sec. 25, T. 36 N., R. 9 E. . .	4	Temperature, first flow, 45°
La Jara Creamery Co. . . . .	65	3	40	60	65	. . .	. . .	Sec. 22, T. 36 N., R. 10 E. . .	3	. . . . .
La Jara Creamery Co. . . . .	115	3	46	85	110	. . .	. . .	Sec. 11, T. 35 N., R. 9 E. . .	10	Temperature, first flow, 45°

Wm. H. Adams . . . . .	150	3	80	80	150	. . .	[Sec. 34, T. 37 N., R. 10 E. . .	8	Temperature, first flow, 45°
L. D. Eskridge . . . . .	85	3	42	85	. . .	. . .	Sec. 2, T. 35 N., R. 9 E. . .	8	Temperature, first flow, 45°
Empire L. & C. Co. . . . .	75	2	45	75	. . .	. . .	Sec. 6, T. 36 N., R. 10 E. . .	5	. . . . .
Dow Eskridge . . . . .	180	2	170	. . .	. . .	. . .	Sec. 12, T. 35 N., R. 8 E. . .	. . .	. . . . . Pump
Empire L. & C. Co. . . . .	155	2	60	80	155	. . .	Sec. 7, T. 36 N., R. 10 E. . .	10	. . . . .
Empire L. & C. Co. . . . .	80	2	50	80	. . .	. . .	Sec. 8, T. 36 N., R. 10 E. . .	4	. . . . .
John Harvey . . . . .	265	3	241	234	. . .	. . .	Sec. 5, T. 35 N., R. 9 E. . .	100	. . . . . Rises 8 feet
Dr. F. A. Linburg . . . . .	85	3	46	85	. . .	. . .	. . . . .	8	Temperature, first flow, 45°
D. R. Smith . . . . .	190	3	40	190	. . .	. . .	. . . . .	10	. . . . .



## COMMISSIONER'S REPORT, A. D. 1890.

DIVISION No. 3—DISTRICT No. 21—FRANK W. SMITH, LA JARA, CONEJOS COUNTY, COLORADO.

No. priority.	NAME OF DITCH	Length thereof in miles.	Number of days water was carried therein.	Average amount of water carried during season of 1890 in cubic feet per second of time.	Number of acres that can be irrigated therefrom.	Number of acres of alfalfa irrigated therefrom.	Number of acres of seeded grasses other than alfalfa from.	Number of acres of natural grasses irrigated therefrom.	Number of acres of other crops irrigated therefrom.	Number of acres irrigated from seepage.	Total number of acres irrigated in district.
1	The El Veigo Ditch. . . . .	1.75	82	10	540	. . . . .	. . . . .	20	500	. . . . .	. . . . .
2	The Gomez Ditch. . . . .	1	83	3	90	. . . . .	. . . . .	13	30	. . . . .	. . . . .
3	The Molino Ditch. . . . .	.75	80.50	6	80	. . . . .	. . . . .	. . . . .	12	. . . . .	. . . . .
4	{ The Hansen's La Jara Overflow Ditch No. 3. . . . . }	2	82	15	350	. . . . .	. . . . .	1,200	2	. . . . .	. . . . .
5	The Swamp Ditch. . . . .	2.50	81	1	1,000	. . . . .	. . . . .	200	. . . . .	80	. . . . .
6	The Garcia Ditch No. 1. . . . .	1.50	79	2.50	260	. . . . .	. . . . .	160	100	. . . . .	. . . . .
7	The McCunniff Ditch. . . . .	1	81.50	12	300	. . . . .	10	50	105	. . . . .	. . . . .
8	The José Valdez Ditch. . . . .	1.75	80.50	11	86	. . . . .	. . . . .	7	160	. . . . .	. . . . .
10	The Capulin Ditch. . . . .	3	83	15	480	. . . . .	. . . . .	600	350	. . . . .	. . . . .
11	The Gábino Gallegos Ditch. . . . .	2	76	12	690	. . . . .	. . . . .	10	300	. . . . .	. . . . .
13	The Garcia Ditch No. 2. . . . .	.50	80	3	120	. . . . .	. . . . .	50	120	. . . . .	. . . . .
14	The San José Ditch No. 2. . . . .	.75	79	2	50	. . . . .	. . . . .	. . . . .	50	. . . . .	. . . . .
15	The Christobal Rivera Ditch. . . . .	1.50	77	7	220	. . . . .	20	200	150	. . . . .	. . . . .

16	The José E. Alencio Ditch . . . . .	.50	80	4	60	. . . . .	. . . . .	15	60	. . . . .
17	The San José Ditch No. 1 . . . . .	.75	81	7	124	. . . . .	. . . . .	4	200	. . . . .
18	The Romero Ditch . . . . .	1.50	79	4.50	280	. . . . .	. . . . .	30	85	. . . . .
19	The Gallegos Ditch No. 4 . . . . .	1	81.50	9	100	. . . . .	. . . . .	30	60	. . . . .
20	The Gallegos Ditch No. 2 . . . . .	1.50	80	7	300	. . . . .	. . . . .	20	200	. . . . .
21	The Juan de Dios Vigil Ditch . . . . .	1.50	79	8	90	. . . . .	. . . . .	6	200	. . . . .
22	The Gallegos Ditch No. 1 . . . . .	1.25	82	8	90	. . . . .	. . . . .	25	35	. . . . .
23	The Newcomb Bros. Ditch . . . . .	2.50	77	15	600	. . . . .	. . . . .	210	160	. . . . .
24	The Ronaldo Valdez Ditch . . . . .	.75	78	2.50	85	. . . . .	. . . . .	15	65	. . . . .
25	The Le Mita Ditch No. 1 . . . . .	1	79	4.50	80	. . . . .	. . . . .	20	20	. . . . .
26	The Ramona Ditch . . . . .	1	76	7	90	. . . . .	. . . . .	160	90	. . . . .
27	The Head Overflow Ditch No. 5 . . . . .	3	72	30	2,100	. . . . .	. . . . .	2,020	. . . . .	500
28	The Le Mita Ditch No. 3 . . . . .	1	77	4	120	. . . . .	. . . . .	30	22	. . . . .
29	The Alamosa and Spring Creek Ditch . . . . .	6	75	25	600	. . . . .	. . . . .	600	40	. . . . .
30	The Garden Ditch . . . . .	1	71	5	80	. . . . .	. . . . .	. . . . .	15	. . . . .
31	The Aqua Caliente Ditch . . . . .	2.25	76	8	320	. . . . .	. . . . .	10	80	. . . . .
32	The Ortiz Ditch . . . . .	2.50	76	11	320	. . . . .	. . . . .	160	70	. . . . .
33	The Eskridge Spring Creek Ditch . . . . .	1.25	70	2	260	. . . . .	. . . . .	160	. . . . .	. . . . .
34	The Sanchez Ditch No. 1 . . . . .	1.25	74	4	100	. . . . .	. . . . .	10	80	. . . . .
35	The Sanchez Ditch No. 2 . . . . .	1	76	4	50	. . . . .	. . . . .	5	40	. . . . .
36	The Aroya Ditch . . . . .	3	71	35	500	. . . . .	. . . . .	500	. . . . .	. . . . .
37	The T. K. Walsh Ditch . . . . .	.75	70	3.50	100	. . . . .	. . . . .	40	40	. . . . .

COMMISSIONER'S REPORT, A. D. 1890—*Concluded.*

No. priority	NAME OF DITCH OR CANAL	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
38	The Union Ditch . . . . .	7	69	75	4,000	30	100	1,600	400	..	..
39	The Lovett Ditch . . . . .	.75	70	6	150	..	..	35	20	60	..
40	The North Alamosa Ditch . . . . .	2.50	71	27	600	15	10	500	..	..	..
43	The Sauco Ditch . . . . .	2	72	6.50	200	..	..	10	40	4	..
44	The Cottonwood Ditch . . . . .	3	70	23	500	175	.25	400	..	..	..
45	The Walsh Ditch . . . . .	1	68	7	85	..	..	60	..	..	..
46	The Gallegos Ditch No. 3 . . . . .	1.75	72	9	550	..	..	500	..	..	..
47	The Penasco Ditch . . . . .	.50	66	2	20	..	..	4	6	..	..
48	The La Piedra Ditch . . . . .	1.25	65	3	180	..	..	1	80	..	..
49	The Pino-real Ditch . . . . .	1.50	71	5.50	100	..	..	10	44	..	..
50	The Thielkeld Ditches . . . . .	.50	60	4	160	..	..	25	50	..	..
51	The Alamosa Ditch . . . . .	2.25	70	11	1,000	..	..	1,200	..	..	..
52	The Eskridge and Garrett Ditch . . . . .	2	65	5	500	30	..	200	30	75	..
53	The Le Mita Ditch No. 2 . . . . .	1	72	4.50	80	..	..	..	35	..	..

56	The Hardlack Ditch . . . . .	1.50	64	13	600	. . . . .	. . . . .	340	300	. . . . .
57	The Lowland Ditch . . . . .	3	70	9.50	1,000	. . . . .	. . . . .	500	50	. . . . .
58	The Clark Ditch . . . . .	1.50	71	5	300	. . . . .	. . . . .	. . . . .	280	. . . . .
59	The Alamos Ditch . . . . .	1.75	68	5	160	. . . . .	. . . . .	5	45	. . . . .
60	The Overflow Ditch No. 4 . . . . .	4	67	45	800	. . . . .	. . . . .	720	. . . . .	. . . . .
61	The Nate Garrett Ditch . . . . .	1.75	66	9	160	. . . . .	. . . . .	. . . . .	55	10
63	The Lower La Jara Ditch . . . . .	10	63	32	3,000	. . . . .	. . . . .	1,000	1,000	. . . . .
64	The Worcester Ditch . . . . .	2	64	9	800	. . . . .	. . . . .	450	50	75
68	The Norland Ditch . . . . .	5.75	69	31	1,200	. . . . .	10	1,120	70	. . . . .
69	The Flintham Ditch . . . . .	3	71	20	500	. . . . .	. . . . .	500	80	. . . . .
70	The Miller Ditch . . . . .	5	75	42	3,200	. . . . .	150	150	450	160
71	The Overflow Ditch No. 1 . . . . .	7	71	85	4,500	. . . . .	. . . . .	400	200	. . . . .
72	The Ed. Newcomb Ditch . . . . .	3.50	69	9	1,000	. . . . .	. . . . .	700	250	. . . . .
73	The Morganville Ditch . . . . .	5.75	74	18	1,540	. . . . .	10	350	500	. . . . .
74	The Plano Vista Ditch . . . . .	6.50	73	19	1,800	. . . . .	120	1,050	300	75
84	The Scandinavian Ditch . . . . .	5	78	36	4,280	. . . . .	5	275	400	. . . . .
85	The Alamosa Creek Canal . . . . .	10	77	87	7,920	. . . . .	15	175	300	. . . . .
88	The Ribera Ditch . . . . .	2.50	69	18	975	. . . . .	. . . . .	. . . . .	129	. . . . .
89	The Madrid Ditch . . . . .	1.25	70	9	380	. . . . .	. . . . .	18	64	. . . . .
91	The Nlarío Ditch . . . . .	.50	72	2.50	15	. . . . .	. . . . .	15	. . . . .	. . . . .
Totals in district . . . . .		161.50	. . . . .	1,000	51,270	459	551	18,713	8,469	29,231

*Water District No. 21*—Frank W. Smith, Commissioner, La Jara.

No report.

---

*Water District No. 22*—A. M. Vigil, Commissioner, Conejos.

Mr. Vigil reports for 1889 crops cultivated as follows: In alfalfa, 230 acres; in seeded grasses other than alfalfa, 380 acres; in natural grasses, 18,480 acres, and in other crops, 12,855 acres, making a total irrigated and cultivated of 31,945 acres.

No report has been received for 1890.

Following will be found his statement in tabulated form.

# COMMISSIONER'S REPORT, A. D. 1889.

DIVISION NO. 3—DISTRICT NO. 22.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1889 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Guadalupe Ditch . . . . .	5	120	69,82	2,000	. . . . .	. . . . .	665	770	. . . . .	. . . . .
The Steads Mill Ditch . . . . .	2.50	151	117	320	. . . . .	. . . . .	150	40	. . . . .	. . . . .
The El Coda Ditch . . . . .	3.50	100	16	1,005	. . . . .	. . . . .	360	315	. . . . .	. . . . .
The Llano Ditch . . . . .	4	100	18	800	. . . . .	. . . . .	310	215	. . . . .	. . . . .
The Garcia Ditch . . . . .	3.50	120	8.55	320	. . . . .	. . . . .	320	. . . . .	. . . . .	. . . . .
The Servielta Ditch . . . . .	5	120	31.77	1,440	. . . . .	. . . . .	460	360	. . . . .	. . . . .
The Seledonio Valdez Ditch . . . . .	2	120	7	320	. . . . .	. . . . .	320	. . . . .	. . . . .	. . . . .
The Los Piños Ditch . . . . .	1.25	120	22.94	480	. . . . .	. . . . .	240	240	. . . . .	. . . . .
The Salazar Ditch . . . . .	1.25	110	2.32	160	. . . . .	. . . . .	100	40	. . . . .	. . . . .
The Mill Ditch . . . . .	.50	150	1	40	. . . . .	. . . . .	40	. . . . .	. . . . .	. . . . .
The San José Ditch . . . . .	4	120	15	800	. . . . .	. . . . .	400	200	. . . . .	. . . . .
The Sinesero Ditch . . . . .	3.50	90	18.31	730	. . . . .	. . . . .	400	330	. . . . .	. . . . .
The Del Puercitas Ditch . . . . .	1.50	100	8.76	160	. . . . .	. . . . .	60	100	. . . . .	. . . . .



## COMMISSIONER'S REPORT, A. D. 1889—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1889 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The San Rafael and Congjos Ditch. . . .	4	127	17.62	1,360	.	.	440	420	.	.
The El Serito Ditch . . . . .	1.25	105	3.19	120	.	.	80	40	.	.
The Gabriel Martinez Ditch. . . . .	1.50	100	1	480	.	.	40	80	.	.
The Santiago Ditch. . . . .	3	120	50	2,000	.	.	1,200	140	.	.
The Archuleta and Trujillo Ditch No. 1.	1.50	100	2	100	.	.	100	.	.	.
The Archuleta and Trujillo Ditch . . . .	.50	100	1	60	.	.	60	.	.	.
The Overflow Ditch . . . . .	1	100	1	160	.	.	100	60	.	.
The Trujillo Ditch . . . . .	1.50	120	13	690	.	.	300	260	.	.
The Cañon Ditch. . . . .	5	120	22	1,200	.	.	500	420	.	.
The La Del Rio Ditch . . . . .	4	120	21	860	.	.	300	210	.	.
The Rincones Ditch . . . . .	3	120	16	600	.	.	270	220	.	.
The Fuerticitas Ditch. . . . .	1.50	120	21	720	.	.	360	290	.	.
The Nueitas Ditch . . . . .	4.50	100	39	1,800	.	.	730	510	.	.
The San Juan and San Rafael Ditch. . .	2.25	120	17	960	.	.	390	460	.	.

The Espinosa Ditch . . . . .	1	70	2	80	. . . . .	. . . . .	80	. . . . .	. . . . .
The Chacon Ditch No. 1 . . . . .	2.25	85	4	180	. . . . .	. . . . .	100	. . . . .	60
The Los Lances Ditch . . . . .	3.50	135	38	2,120	. . . . .	. . . . .	830	. . . . .	635
The Lovoto Ditch. . . . .	2	100	7.50	320	. . . . .	. . . . .	320	. . . . .	. . . . .
The José B. Romero Ditch. . . . .	3	100	28.25	1,300	. . . . .	. . . . .	1,000	. . . . .	300
The Benardo Romero Ditch . . . . .	3	120	9	480	. . . . .	. . . . .	300	. . . . .	110
The Galbis Ditch. . . . .	1.50	120	3	140	. . . . .	. . . . .	60	. . . . .	60
The Sanchez Ditch. . . . .	3	100	17	640	. . . . .	. . . . .	300	. . . . .	200
The J. F. Chacon Ditch No. 3 . . . . .	2	110	4	120	. . . . .	. . . . .	40	. . . . .	80
The Saline School Section Ditch . . . . .	1	60	7	320	. . . . .	. . . . .	240	. . . . .	80
The J. O. Martinez Ditch. . . . .	1	80	3	160	. . . . .	. . . . .	100	. . . . .	45
The Vega Grande Ditch . . . . .	1.75	110	11	400	. . . . .	. . . . .	330	. . . . .	40
The Au Con Ditch . . . . .	2.25	110	10	480	. . . . .	. . . . .	180	. . . . .	160
The Wm. Stewart & Co. Ditch . . . . .	2.50	75	8	843	. . . . .	. . . . .	300	. . . . .	20
The J. F. Chacon Ditch No. 2 . . . . .	2.50	100	10	360	. . . . .	. . . . .	180	. . . . .	180
The Lovoto Ditch. . . . .	1	90	3	60	. . . . .	. . . . .	60	. . . . .	. . . . .
The McCarroll Ditch . . . . .	2.50	100	8	540	. . . . .	. . . . .	200	. . . . .	230
The Manassa Ditch. . . . .	4	115	73	3,200	. . . . .	. . . . .	400	. . . . .	2,600
The W. Sabine Ditch No. 1. . . . .	2.50	100	2	80	. . . . .	. . . . .	80	. . . . .	. . . . .
The Martinez Ditch . . . . .	8	100	12	720	. . . . .	. . . . .	300	. . . . .	220
The J. M. Espinosa Ditch . . . . .	.25	100	6	240	. . . . .	. . . . .	175	. . . . .	55

## COMMISSIONER'S REPORT, A. D. 1889—Concluded.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1889 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Cordava Ditch . . . . .	.50	120	4	243	.	.	150	65	.	.
The Chanes Ditch . . . . .	1	120	7	320	.	.	155	105	.	.
The Jack's Ditch . . . . .	.50	110	3.50	160	.	.	40	105	.	.
The Ephraim Ditch . . . . .	5	120	47	4,280	150	175	600	2,100	.	.
The Martinez Ditch . . . . .	2.50	100	6.50	320	.	.	285	35	.	.
The Los Ojos Ditch No. 2 . . . . .	1.25	70	5.95	320	.	.	320	.	.	.
The Redfield Ditch . . . . .	5	110	56	2,720	70	150	600	1,360	.	.
The Loma Parda Ditch . . . . .	3	120	10	480	10	25	100	220	.	.
The Becroft Ditch . . . . .	1.50	100	4	220	.	30	100	80	.	.
The W Sabine Ditch No. 2 . . . . .	1.25	110	6	320	.	.	300	20	.	.
The Los Ojos Ditch No. 1 . . . . .	3.75	100	18	1,420	.	.	800	330	.	.
The Elledge Ditch . . . . .	1	120	3	160	.	.	160	.	.	.
The Angustura Ditch . . . . .	2.50	100	3.25	160	.	.	120	40	.	.
The North-Eastern Ditch . . . . .	9	70	10	1,920	.	.	480	.	.	.
Total in district . . . . .	160.25	.	1,041.23	46,511	230	380	18,480	12,855	.	31,945

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 22, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM  
DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH.	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Cañon Irrigating Ditch . . . . .	Concejos river . . . . .	Jan. 8, 1889	April 5, 1888	12	George Reckers <i>et al</i>
The Spring Ditch . . . . .	Concejos river . . . . .	Jan. 15, 1889	Sept. 24, 1885	6.75	John and Francisca Atkinson
The Almo Irrigating Ditch, first enlargement . . . . .	Concejos river . . . . .	Mar. 6, 1889	Oct. 25, 1888	16	Charles M. Ball <i>et al</i>
The Allman Irrigating Ditch . . . . .	San Antonio river . . . . .	April 10, 1889	Mar. 22, 1889	25.50	James Allman <i>et al</i>
The A. D. Archuleta Irrigat'g Ditch . . . . .	Concejos river . . . . .	April 26, 1889	April 20, 1884	19	A. D. Archuleta
The East Bend Ditch . . . . .	Concejos river . . . . .	July 13, 1889	Nov. 8, 1887	Indefinite	James H. Jack <i>et al</i>
The John Minor Irrigating Ditch . . . . .	Fox creek . . . . .	Nov. 2, 1889	July 25, 1889	6	John Minor
The Jose Bonifacio Romero Irrigating Ditch, first enlargement . . . . .	Concejos river . . . . .	Nov. 19, 1889	Oct. 3, 1888	36	José Bonifacio Romero
The J. F. Chacon Ditch No. 2, enl. . . . .	Concejos river . . . . .	Nov. 23, 1889	May 1, 1884	2	Juan F. Chacon
The J. F. Chacon Ditch No. 2, enl. . . . .	Concejos river . . . . .	Dec. 7, 1889	Mar. 10, 1889	2	Jesus Ma Galegos
The Taos Valley Canal No. 1 . . . . .	Concejos river . . . . .	Dec. 21, 1889	Nov. 28, 1887	500	The Taos Valley Company
The Taos Valley Canal No. 2 . . . . .	San Antonio river . . . . .	Dec. 21, 1889	Aug. 25, 1888	500	The Taos Valley Company
The Taos Valley Canal No. 3 . . . . .	San Antonio river . . . . .	Dec. 21, 1889	Sept. 5, 1889	500	The Taos Valley Company
The Mogales Valley Ditch . . . . .	Concejos river . . . . .	Feb. 13, 1890	June 1, 1888	14.25	Aaron Von Cannon <i>et al</i>

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The LeDuc Ditch . . . . .	Conejos river . . . . .	Feb. 13, 1890	May 1, 1885	3	. . . . . C. E. Broyles
The LeDuc Ditch, enlargement . . . . .	Conejos river . . . . .	Feb. 19, 1890	May 1, 1889	3	. . . . . James Von Cannon
The Fox Irrigating Ditch No. 1 . . . . .	Fox creek . . . . .	Feb. 19, 1890	May 1, 1886	6.67	. . . . . James W. Hartley
The Fox Irrigating Ditch No. 2 . . . . .	Fox creek . . . . .	Feb. 19, 1890	May 1, 1886	3.12	. . . . . James W. Hartley
The Le Duc Ditch Extension . . . . .	Conejos river . . . . .	Feb. 20, 1890	May 1, 1889	2	. . . . . David Vance
The Florida Ditch. . . . .	San Antonio river . . . . .	Feb. 27, 1890	Aug. 20, 1889	20.80	. . . . . The Florida Ditch Co
The Florida Ditch. . . . .	San Antonio river . . . . .	May 10, 1890	Aug. 20, 1889	20.80	. . . . . The Florida Ditch Co
The Servilleta Ditch, second enlargement . . . . .	Conejos river . . . . .	June 2, 1890	April 1, 1888	9.95	. . . . . Celestina Garcia and Juan Uñebio Lucero
The Servilleta Ditch, first enlargement . . . . .	Conejos river . . . . .	June 11, 1890	April 1, 1887	5	. . . . . Jose Francisco Valdez
San Juan & San Rafael Ditch, first enlargement . . . . .	Conejos river . . . . .	June 14, 1890	July 20, 1889	16	. . . . . James B. Neff

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 22, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Taos Valley Co.'s reservoirs:						
Alta Lake . . . . .	{ Conejos river and San Antonio river }	{ Taos Valley Canals Nos. 1 and 2 }	Dec. 21, 1889	Oct. 1, 1889	10,000,000	The Taos Valley Co
Cove Lake . . . . .			Dec. 21, 1889	Oct. 1, 1889	150,000,000	



No Water Commissioner has been appointed for District No. 24.

---

*Water District No. 25*—Joseph C. Braley, Commissioner, Villa Grove.

Mr. Braley reports for 1890, that he began the distribution of water April 18, and employed one assistant, that considerable dissatisfaction was manifested over erroneous decrees, granting water in excess of ditch capacities, and the requirements of land, and recommends official measurements to correct errors.

He regards the distribution of water for domestic purposes impracticable, on account of the great waste and abuse of the privilege.

He further reports some favorable sites for reservoirs, the construction of which would materially increase production and give ample water supply for the district.

Mr. Braley also complains of the insufficiency of the Commissioners' pay, on account of the expense in traversing a large district, horse hire, etc.

COMMISSIONER'S REPORT, A. D. 1890.

DIVISION No. 3—DISTRICT No. 25.

No.	Name of Ditch	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
1	The Wells, N. M. and K. C., Ditch . . .	.25	. . .	3.20	160	. . .	. . .	160	. . .	. . .	. . .
2	The Dittrich Ditch No. 1 . . . . .	.50	. . .	2.20	160	. . .	. . .	160	. . .	. . .	. . .
3	The Dittrich Ditch No. 2 . . . . .	.10	. . .	3.20	160	. . .	. . .	160	. . .	. . .	. . .
4	The Neidhardt Ditch . . . . .	4.25	. . .	4.40	220	. . .	6	80	40	. . .	. . .
4	The Hoffman Ditch . . . . .	1.25	. . .	.60	30	. . .	. . .	30	. . .	. . .	. . .
5	{ The Baca Grant Ditch No. 3 The Baca Grant Ditch No. 4 . . . . . }	1.50 .90	. . . . . .	. . . 7	. . . 350	. . . . . .	. . . . . .	. . . 250	. . . 100	. . . . . .	. . . . . .
6	The Major Creek . . . . .	4.20	. . .	3.90	195	. . .	. . .	100	. . .	. . .	. . .
7	The Neidhardt Ditch . . . . .	4.25	. . .	1	50	. . .	. . .	50	. . .	. . .	. . .
8	The Garner Ditch . . . . .	3.30	. . .	6.40	320	. . .	. . .	200	48	. . .	. . .
9	The Cotton Creek Ditch (Warrant) . . . . .	5.60	. . .	2	100	. . .	. . .	125	. . .	. . .	. . .
9	The Wales and Shellabarger Ditch No. 1	1.25	. . .	2.50	125	. . .	. . .	125	. . .	. . .	. . .

Baca (see Priority number 5)

## COMMISSIONER'S REPORT, A. D. 1890--Continued.

No. Priority	NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
11	The Claytons Ditch "F". . . . .	1	. . .	1.80	90	. . .	. . .	90	. . .	. . .	. . .
12	The Cotton Creek Ditch, (E. Tabler) . . . . .	5.60	. . .	1.60	80	. . .	. . .	40	40	. . .	. . .
12	The Wales and Travis Ditch . . . . .	3.50	. . .	3.60	180	. . .	. . .	180	. . .	. . .	. . .
12	The Wales and Sons Ditch No. 1. . . . .	.50	. . .	1	50	. . .	. . .	10	40	. . .	. . .
12	The Wales and Sons Ditch No. 2. . . . .	.42	. . .	.80	40	. . .	. . .	. . .	40	. . .	. . .
12	The North Ditch . . . . .	5	. . .	1.20	60	. . .	. . .	60	. . .	. . .	. . .
12	The San Isabel Ditch (Bassett). . . . .	8	. . .	2.80	140	. . .	. . .	120	20	. . .	. . .
13	The Hoffman Ditch . . . . .	1.25	. . .	1	50	. . .	. . .	50	. . .	. . .	. . .
14	The Wales & Shellabarger Ditch No. 2. . . . .	5	. . .	4.40	220	. . .	10	206	4	. . .	. . .
14	The Schultz and Ditttrich Ditch . . . . .	3	. . .	2.80	140	. . .	. . .	100	40	. . .	. . .
15	The Peterson Ditch No. 1, (See No. 20). . . . .										
16	The San Luis Ditch Co.'s Ditch . . . . .	5.25	. . .	12.75	637.5	. . .	. . .	575	152	. . .	. . .
17	The Steele Creek Ditch No. 1 . . . . .	1.25	. . .	4.20	210	. . .	. . .	135	75	. . .	. . .
18	The Hot Spring Creek Ditch . . . . .	1	. . .	3.96	198	. . .	. . .	65	39	. . .	. . .

19	The Claytons Ditch "D"	1.10	...	4	210	...	...	...	200	...	...
19	The Claytons Ditch "E"	.75	...	4.40	220	...	...	...	220	...	...
20	The Peterson Ditch No. 1	2	...	11.40	570	...	...	...	470	78	...
21	The Wales and Sons Ditch No. 3	1.25	...	4	200	...	...	...	200	...	...
21	The Neidhardt Ditch	4.25	...	2.20	110	...	...	...	110	...	...
22	The Shellebarger Home Ditch No. 2	5	...	3	150	...	...	...	110	40	...
22	The San Isabel Ditch	8	...	2.30	115	...	...	...	115	...	...
23	The Schilling Ditch	.50	...	2.80	140	...	...	...	140	...	...
24	The Cotton Creek Ditch (J. A. Johnston)	5.60	...	2	100	...	...	...	70	30	...
25	The Wales and Sons Ditch No. 2	5	...	6.40	320	...	...	...	320	...	...
26	The Wales and Sons Ditch No. 1	.50	...	2.20	110	...	...	...	110	...	...
27	The Shellebarger Home Ditch No. 1	.50	...	2.40	120	...	...	...	100	20	...
28	The Shellebarger Home Ditch No. 2	.50	...	3	150	...	...	...	120	...	...
29	The Tabor Ditch	.56	...	.40	20	...	...	...	18	2	...
30	The H. H. Wales Ditch	.75	...	.80	40	...	...	...	40	...	...
30	The Schultz and Dittreich Ditch	3	...	5.40	270	...	...	...	200	70	...
31	The Daniels and Fish Ditch	1	...	2	100	...	...	...	100	...	...
32	The Cotton Creek Ditch (Winkler)	5.60	...	1.80	90	...	...	...	125	36	...
32	The Neidhardt Ditch (Cloud and others)	4.25	...	2.60	130	...	...	...	130	...	...
32	The Gordon Ditch	1.75	...	1.40	70	...	...	...	35	35	...
33	The Kennedy Ditch	.50	...	11.30	590	...	...	...	590	...	...
34	The Shellebarger and Eaton Ditch	2	...	.50	25	...	...	...	25	...	...

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

No. Priority	NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
35	The Steel Creek Ditch No. 1 . . . . .	1.25	. . . . .	1	50	. . . . .	. . . . .	50	. . . . .	. . . . .	. . . . .
36	The Tobler Rominger Ditch . . . . .	1.10	. . . . .	10	500	. . . . .	. . . . .	410	. . . . .	. . . . .	. . . . .
37	The Shelleberger San Luis Ditch . . . . .	.50	. . . . .	4	200	. . . . .	. . . . .	200	. . . . .	. . . . .	. . . . .
38	The Clayton's Old Channel Ditch . . . . .	1	. . . . .	2.40	120	. . . . .	. . . . .	120	. . . . .	. . . . .	. . . . .
39	The Wales San Luis Ditch . . . . .	.12	. . . . .	4	200	. . . . .	. . . . .	200	. . . . .	. . . . .	. . . . .
40	The Wales Ditch No. 2 . . . . .	.40	. . . . .	1	50	. . . . .	. . . . .	50	. . . . .	. . . . .	. . . . .
40	The Wales Ditch No. 4 . . . . .	.25	. . . . .	1.60	80	. . . . .	. . . . .	80	. . . . .	. . . . .	. . . . .
41	The Peterson Ditch No. 1 . . . . .	2	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
42	The Hills Ditch No. 1 . . . . .	.15	. . . . .	.72	36	. . . . .	. . . . .	26	10	. . . . .	. . . . .
43	The Wales & Travis Ditch . . . . .	. . . . .	. . . . .	3.30	165	. . . . .	. . . . .	165	. . . . .	. . . . .	. . . . .
44	The Sanchez Ditch . . . . .	.20	. . . . .	.50	25	. . . . .	. . . . .	12	13	. . . . .	. . . . .
44	The Cotto Creek Ditch . . . . .	. . . . .	. . . . .	3.60	180	. . . . .	. . . . .	140	40	. . . . .	. . . . .
45	The Sauford Ditch . . . . .	.75	. . . . .	2.40	120	. . . . .	. . . . .	120	. . . . .	. . . . .	. . . . .
45	The Hills Ditch No. 2 . . . . .	.50	. . . . .	.30	15	. . . . .	. . . . .	. . . . .	15	. . . . .	. . . . .

45	The Hills Ditch No. 3	.42	.08	4				4		
45	The San Isabel Ditch	8	5.10	255				255		
46	The Hills Ditch No. 4	.50	.16	8				8		
47	The Clayton's Ditch "A"	.40	2.40	120				120		
47	The Cayton's Ditch "B"	.66	4	200				200		
48	The San Luis Ditch	5.25								
49	The Garner Ditch No. 2	.40	2	100				100		
50	The Halls Ditch No. 1	.50	5.30	265	25	15		225		
51	The Hoffman Ditch No. 2	.60	.90	45				45		
51	The Spiegel Ditch	.40	2.25	112.5				112.5		
51	The Hill Ditch No. 1	.25	1.50	75				75		
51	The Hill Ditch No. 2	.08	.20	10				10		
51	The Hill Ditch No. 3	.10	2	100		6		53	41	
51	The Hill Ditch No. 4	.25	.20	10				10		
51	The Hill Ditch No. 5	.50	.80	40				40		
51	The Hill Ditch No. 6	.60	.70	35				35		
51	The Hill Ditch No. 7	.42	.30	15				15		
51	The Hill Ditch No. 8	.25	.70	35				35		
52	The Cotton Creek Ditch (Bennet & Others)		6.40	320				235	85	
53	The Huffman Ditch		.40	20				20		
54										
55	The "T. A. Young" Ditch	5.25	16	800				800		



## COMMISSIONER'S REPORT, A. D. 1890—Continued.

No. Priority.	NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
56	The Aurora Ditch. . . . .	.10	. . .	3,20	160	. . .	. . .	160	. . .	. . .	. . .
56	The Daniel & Fish Ditch . . . . .	.10	. . .	2,80	140	. . .	. . .	140	. . .	. . .	. . .
57	The Allen Ditch No. 1 . . . . .	.50	. . .	1,60	. . .	. . .	. . .	. . .	. . .	. . .	. . .
58	The North San Isabel Ditch . . . . .	5	. . .	1,50	75	. . .	. . .	75	. . .	. . .	. . .
58	The San Isabel Ditch . . . . .	. . .	. . .	1,50	75	. . .	. . .	75	. . .	. . .	. . .
58	The B. Clark Ditch . . . . .	.75	. . .	1,40	70	. . .	. . .	60	10	. . .	. . .
59	The Hall & Howard Ditch . . . . .	1.05	. . .	1,30	65	. . .	. . .	39	26	. . .	. . .
60	The Heukaufer Ditch No. 2 . . . . .	. . .	. . .	.30	15	. . .	. . .	. . .	15	. . .	. . .
61	The Allen Ditch No. 1 . . . . .	.10	. . .	1,60	80	. . .	. . .	80	. . .	. . .	. . .
62	The Ford Ditch No. 1. . . . .	.50	. . .	1,60	80	. . .	. . .	80	. . .	. . .	. . .
63	The F. W. Hills Ditch No. 5 . . . . .	.82	. . .	2,26	113	. . .	. . .	113	. . .	. . .	. . .
64	The Showalters Ditch No. 1 . . . . .	.21	. . .	.70	35	. . .	. . .	12	23	. . .	. . .
64	The Showalters Ditch No. 2 . . . . .	.04	. . .	.80	40	. . .	. . .	40	. . .	. . .	. . .
9	The Baca Grant Ditch No 9 . . . . .	5.80	. . .	20	1,000	. . .	. . .	1,000	. . .	. . .	. . .

9	The Baca Grant Ditch No. 11	1.50	...	9	450	...	...	...	450	...	...
		3.50	...	44.20	2,210	...	...	...	2,210	...	...
		1	...	5.40	270	...	...	...	270	...	...
		.50	...	4	200	...	...	...	150	...	...
9	The Squires Ditch No. 1	1.40	...	5.40	270	...	...	...	270	...	...
		1.60	...	4	200	...	...	...	200	...	...
		.75	...	4	200	...	...	...	196	...	...
		1	...	3.92	196	...	...	...	150	...	...
10-80	The Baca Grant Ditch	3	...	29	1,450	...	...	...	1,200	...	...
		3.50	...	26	1,300	...	...	...	1,300	...	...
		1.80	...	11.60	580	...	...	...	500	...	...
		.75	...	2.40	120	...	...	...	120	...	...
132	The Baca Grant Ditch	5.80	...	39.80	1,990	...	...	...	1,990	...	...
		1.25	...	5.40	270	...	...	...	270	...	...
		.75	...	4	200	...	...	...	200	...	...
		14	...	70	3,500	...	...	...	3,000	...	...
133	The Baca Grant Ditch	1.62	...	20.40	1,020	...	...	...	1,020	...	...
		3.50	...	39	1,950	...	...	...	1,950	...	...
		3	...	24	1,200	...	...	...	1,200	...	...
		3	...	20.80	1,040	...	...	...	1,040	...	...
133	The Baca Grant Ditch	2	...	2.76	138	...	...	...	138	...	...
		.82	...	1	50	...	...	...	50	...	...

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

No. priority	NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
12	The Baca Grant Ditch No. 8 . . . . .	1	. . .	3.80	190	. . .	. . .	190	. . .	. . .	. . .
14	{ The Baca Grant Ditch No. 10 . . . . .	5.08	. . .	39.40	1,970	. . .	. . .	1,970	. . .	. . .	. . .
129											
75	The McParland A Ditch . . . . .	1.50	. . .	4.40	220	10	. . .	130	36	. . .	. . .
75	The Barsch B Ditch . . . . .	1.25	. . .	2.40	120	. . .	. . .	76	36	. . .	. . .
75	The Barsch Ditch No. 1 . . . . .	.50	. . .	1.60	80	. . .	. . .	70	. . .	. . .	. . .
75	The Robinson Ditch . . . . .	.12	. . .	1.80	80	2	. . .	55	23	. . .	. . .
. .	The Robinson & Reeve Ditch . . . . .	.40	. . .	2.20	110	. . .	. . .	50	60	. . .	. . .
76	The Clarks A Ditch . . . . .	1.70	. . .	7.20	360	10	. . .	300	35	. . .	. . .
. . .	The Trajilla Ditch . . . . .	.50	. . .	.30	15	. . .	. . .	. . .	15	. . .	. . .
65	The "Ross" Ditch . . . . .	.75	. . .	4.70	235	. . .	. . .	235	. . .	. . .	. . .
66	The "Brilery" Ditch . . . . .	.50	. . .	1.20	60	. . .	. . .	35	25	. . .	. . .
66	The Wales & Shellabarger Ditch No. 2 . . . . .	5	. . .	6.40	320	. . .	. . .	320	. . .	. . .	. . .
67	The Gash Ditch . . . . .	1	. . .	.60	30	. . .	. . .	30	. . .	. . .	. . .
68	The Hopkins Ditch . . . . .	.25	. . .	.12	6	. . .	. . .	. . .	1	. . .	. . .

	.40	.	2	100	.	.	100	.	.	.
69 The Silver Creek Ditch . . . . . The Schleibarger Ditch No. 2 . . . . .	1.50 .50	.	4.80 2.40	240 120	.	.	240 115	.	.	.
70 The Neeland Ditch . . . . .	.12	.	.90	45	.	.	45	.	.	35
70 The Means Ditch No. 1 . . . . .	.25	.	.50	25	.	.	20	.	.	15
70 The Stump Ditch No. 1 . . . . .	.40	.	.12	6	.	.	6	.	.	.
71 The Stump Ditch No. 2 . . . . .	.20	.	.20	10	.	.	12	.	.	.
71 The Stump Ditch No. 3 . . . . .	.12	.	.30	15	.	.	10	.	.	8
72 The Means Ditch No. 2 . . . . .	.	.	3	150	.	.	150	.	.	5
73 The Schultz & Dietrich Ditch . . . . .	.50	.	2	100	.	25	60	.	.	.
74 The Hall's Ditch No. 1 . . . . .	.	.	.	.	.	.	.	.	.	.
75 . . . . .	.25	.	.16	8	.	.	.	.	.	8
76 The Davidson Ditch No. 1 . . . . .	.15	.	.70	35	.	.	25	.	.	10
76 The H. White Ditch . . . . .	.04	.	1.20	60	.	.	40	.	.	10
77 The Turner Ditch . . . . .	.70	.	1.20	60	.	.	54	.	.	6
78 The Richards Ditch No. 1 . . . . .	I	.	.60	30	.	.	.	.	.	30
79 The J. H. Ridenour Ditch . . . . .	.25	.	.60	30	.	.	19	.	.	21
80 The Davidson Ditch No. 2 . . . . .	.	.	.	.	.	.	.	.	.	.
81 . . . . .	.	.	.	.	.	.	.	.	.	.
82 The J. B. Hall's Ditch No. 1 . . . . .	.70	.	2.40	120	.	.	120	.	.	.
83 The Tobler Ditch . . . . .	.	.	.80	40	.	.	40	.	.	.
84 . . . . .	.	.	.	.	.	.	.	.	.	.
85 The Chas. Kennedy Ditch No. 3 . . . . .	.25	.	I	50	.	.	50	.	.	.

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

No. priority	NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
86	The G. C. Travis Ditch . . . . .	.12	. . . . .	.08	4	. . . . .	. . . . .	. . . . .	4	. . . . .	. . . . .
86	The Richards Ditch No. 2 . . . . .	.25	. . . . .	.24	12	. . . . .	. . . . .	12	. . . . .	. . . . .	. . . . .
87	The Claytons "G" Ditch . . . . .	1.25	. . . . .	2	100	. . . . .	. . . . .	20	80	. . . . .	. . . . .
88	The De Camp Ditch . . . . .	.50	. . . . .	1.80	90	. . . . .	. . . . .	80	10	. . . . .	. . . . .
89	The Kauffmann Ditch . . . . .	2.25	. . . . .	2	100	. . . . .	. . . . .	80	16	. . . . .	. . . . .
90	The White Ditch . . . . .	.25	. . . . .	.40	20	. . . . .	. . . . .	20	. . . . .	. . . . .	. . . . .
90	The Wales & Travis Ditch . . . . .	. . . . .	. . . . .	7.50	375	. . . . .	. . . . .	375	. . . . .	. . . . .	. . . . .
91	The Davidson Ditch No. 3 . . . . .	.25	. . . . .	.80	40	. . . . .	. . . . .	40	. . . . .	. . . . .	. . . . .
92	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
93	The Charles Ditch . . . . .	.50	. . . . .	.40	20	. . . . .	. . . . .	10	10	. . . . .	. . . . .
94	The E. and F. M. Hill Ditch . . . . .	.82	. . . . .	1	50	. . . . .	. . . . .	50	. . . . .	. . . . .	. . . . .
95	The Peterson Ditch No. 1. . . . .	2	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
96	The D. and F. Aurora Ditch . . . . .	.10	. . . . .	2.80	140	. . . . .	. . . . .	140	. . . . .	. . . . .	. . . . .
96	The Malcolm Ditch. . . . .	.03	. . . . .	.70	35	. . . . .	. . . . .	33	2	. . . . .	. . . . .

97	The Nash Ditch . . . . .	4	. . . .	5	250	. . . .	. . . .	150	15	. . . .
98	The San Isabel Ditch, . . . . .	. . . .	. . . .	12	600	. . . .	. . . .	560	40	. . . .
99	The H. C. Ridenour Ditch No. 1, . . . .	.20	. . . .	1.30	65	. . . .	. . . .	45	20	. . . .
100	The Ewing Ditch, . . . . .	.70	. . . .	1.90	95	. . . .	. . . .	95	. . . .	. . . .
101	The Clayton "C" Ditch, . . . . .	1	. . . .	3.60	180	. . . .	. . . .	180	. . . .	. . . .
102	The H. Wales Ditch . . . . .	. . . .	. . . .	1.60	80	. . . .	. . . .	60	20	. . . .
103	The Stump Ditch No. 4, . . . . .	.25	. . . .	.20	10	. . . .	. . . .	10	. . . .	. . . .
104	The A. G. Clark Ditch . . . . .	1.70	. . . .	3.20	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
105	The Sapp & Braley Ditch, . . . . .	.50	. . . .	2.80	140	. . . .	. . . .	100	10	. . . .
106	The Stump Ditch No. 5, . . . . .	.25	. . . .	.20	10	. . . .	. . . .	10	. . . .	. . . .
107	The Prairie Dog Ditch . . . . .	.50	. . . .	.20	10	. . . .	. . . .	. . . .	. . . .	. . . .
108	. . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
109	The Norris Ditch No. 1, . . . . .	.82	. . . .	4.70	35	. . . .	. . . .	25	10	. . . .
110	The Reese Ditch . . . . .	.20	. . . .	2.40	120	. . . .	. . . .	. . . .	. . . .	. . . .
111	The Braley Ditch . . . . .	.12	. . . .	1.40	70	. . . .	. . . .	. . . .	. . . .	. . . .
112	The Sapp & Braley Ditch . . . . .	.50	. . . .	.80	40	. . . .	. . . .	. . . .	. . . .	. . . .
113	The Sanfords Ditch, . . . . .	. . . .	. . . .	1.80	90	. . . .	. . . .	90	. . . .	. . . .
113	The San Isabel Ditch, . . . . .	8	. . . .	3.20	160	. . . .	. . . .	160	. . . .	. . . .
114	The Jordan Ditch No. 2, . . . . .	.27	. . . .	.80	40	. . . .	. . . .	. . . .	. . . .	. . . .
115	The San Isabel Ditch, . . . . .	. . . .	. . . .	4.46	223	. . . .	. . . .	223	. . . .	. . . .
116	The Jordan Ditch No. 1, . . . . .	4-25	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
117	The Wales and Sons' Ditch No. 2, . . . .	5	. . . .	6.80	340	. . . .	. . . .	320	20	. . . .





[illegible]

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 25, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Cope Ditch . . . . .	Little Spring creek . . .	Dec. 26, 1888	June, 1888	2.25	. . . . . F. L. Cope
The Davidson Ditch "A" . . . . .	Spring creek . . . . .	Dec. 26, 1888	. . . , 1884	2.25	. . . . . D. M. Davidson
The Davidson Ditch "B" . . . . .	Spring creek . . . . .	Dec. 26, 1888	. . . , 1882	2.25	. . . . . D. M. Davidson
The Davidson Ditch "C" . . . . .	Spring creek . . . . .	Dec. 26, 1888	Spring, 1882	2.25	. . . . . D. M. Davidson
The Davidson Ditch "D" . . . . .	Mainpin creek . . . . .	Dec. 26, 1888	Spring, 1884	2	. . . . . D. M. Davidson
The McFarland Ditch "A" . . . . .	McFarland creek . . . . .	Dec. 26, 1888	April, 1881	8	. . . . . M. McFarland
The McFarland Ditch "B" . . . . .	Butterfly gulch . . . . .	Dec. 26, 1888	May, 1881	6.50	. . . . . M. McFarland
The McFarland Ditch "C" . . . . .	Ditch "A" . . . . .	Dec. 26, 1888	. . . , 1881	2	. . . . . M. McFarland
The McFarland Ditch "D" . . . . .	Ditch "A" . . . . .	Dec. 26, 1888	Summ'r, 1885	2.50	. . . . . M. McFarland
The Ewing Ditch . . . . .	San Isabel creek . . . . .	Dec. 27, 1888	Nov. 16, 1888	10	{ Geo H. Rood, Martin Ewing and H. C. Frazee
The Gay Ditch . . . . .	Willow creek . . . . .	Dec. 27, 1888	Oct. 25, 1888	25	{ Matthew R. Clements, Kate Clements, Charles A. Scandrett, Jasper N. Reed and William I. Scandrett.
The Bennett Ditch . . . . .	Major creek . . . . .	Jan. 8, 1889	Aug., 1888	8	. . . . . I. Sherman Bennett
The Spring Ditch . . . . .	A spring . . . . .	Jan. 8, 1889	. . . , 1875	8	. . . . . I. Sherman Bennett

The Davidson Ditch No. 1 . . . . .	Spring creek . . . . .	Jan 8, 1889	Spring, 1882	70	. . . . . D. M. Davidson
The Davidson Ditch No. 2 . . . . .	Spring creek . . . . .	Jan. 8, 1889	Spring, 1882	14	. . . . . D. M. Davidson
The Gingerich Ditch . . . . .	Kerber creek . . . . .	Jan. 23, 1889	Not given	18	. . . . . James M. Gingerich
The Carey Ditch . . . . .	Rito Alto creek . . . . .	Mar. 6, 1889	May, 1888	9	. . . . . William Carey
The Garner Ditch No. 2 . . . . .	W. Br. San Luis creek . . . . .	Mar. 11, 1889	Feb. 12, 1889	6.16	. . . . . Phillip Garner
The Frazee Ditch . . . . .	The Allen Ditch . . . . .	Mar 15, 1889	Not given	1	. . . . . C. T. Frazee
The F. P. Bertschy Ditch . . . . .	Hot Spring creek . . . . .	Mar. 27, 1889	Mar. 8, 1889	1.50	. . . . . F. P. Bertschy
The Braley Ditch . . . . .	San Luis creek . . . . .	April 3, 1889	May, 1887	2.25	. . . . . J. C. Braley
The Crawford Ditch . . . . .	San Luis creek . . . . .	April 3, 1889	Fall, 1882	1.20	. . . . . R. M. Crawford
The Ferguson Ditch "A" . . . . .	Dry Gulch . . . . .	April 3, 1889	Spring, 1888	3	. . . . . J. S. Ferguson
The Ferguson Ditch "B" . . . . .	Raspberry creek . . . . .	April 3, 1889	Spring, 1888	4.25	. . . . . J. S. Ferguson
The Ferguson Ditch "C" . . . . .	Springs . . . . .	April 3, 1889	Spring, 1889	1	. . . . . J. S. Ferguson
The Ridenour Ditch . . . . .	A spring . . . . .	April 3, 1889	. . . , 1883	4	. . . . . John H. Ridenour
The Sapp Ditch . . . . .	San Luis creek . . . . .	April 3, 1889	May, 1885	3.50	. . . James M. Sapp and J. C. Brayley
The Continuation of Frazee Ditch . . . . .	Frazee Ditch . . . . .	April 3, 1889	Feb. 5, 1889	4.30	. . . . . C. T. Frazee
The Marshall ditch . . . . .	San Isabel creek . . . . .	May 1, 1889	Not given	3	. . . . . Almond Marshall
The C. S. Clark Ditch "A" . . . . .	Neeland creek . . . . .	May 1, 1889	Spring, 1880	5.25	. . . . . E. S. Clark
The C. S. Clark Ditch "B" . . . . .	Rock Creek Ditch . . . . .	May 1, 1889	. . , 1882	1.10	. . . . . E. S. Clark
The Carver Ditch . . . . .	Major creek . . . . .	May 24, 1889	Mar. 28, 1889	1.20	. . . . . Thomas Carver
The Hoffman Ditch . . . . .	Major creek . . . . .	May 24, 1889	Spring, 1889	1.20	. . . . . A. H. Schavackenberg
The Hugo Henkanfer Ditch . . . . .	{ Crestone creek thro' Bacca Grant Ditch No. 12 . . . . . }	May 24, 1889	April 24, 1889	3.80	. . . . . Hugo Henkanfer
The Henry C. Ridenour Ditch . . . . .	Springs . . . . .	May 24, 1889	. . . , 1888	1.20	. . . . . H. C. Ridenour

STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Barnes Ditch No. 1 . . . . .	San Isabel creek . . . . .	June 4, 1889	June 1, 1888	10.23	. . . . . J. H. Barnes
The Shellabarger-Eaton Ditch, enlargement and extension of . . . . .	Rito Alto creek . . . . .	June 4, 1889	Mar. 20, 1889	13.10	. . . . . R. P. Thomas
The Bonny Bell Irrigation Ditch . . . . .	Rito Alto creek . . . . .	June 6, 1889	May 4, 1889	2.50	Ira Marshall and Warren B. Marshall
The Hall Ditch No. 2 . . . . .	San Luis creek . . . . .	June 24, 1889	Oct. 20, 1888	4.79	. . . . . J. B. Hall
The Willis Henderson Irrigation Ditch . . . . .	Lone Tree creek . . . . .	July 2, 1889	June 12, 1889	6.14	. . . . . Willis Henderson
The J. M. Stump Irrigation Ditch . . . . .	Clover creek . . . . .	July 8, 1889	June, 1889	3.26	. . . . . J. M. Stump
The Shellabarger and Eaton Ditch . . . . .	Rito Alto creek . . . . .	July 19, 1889	May 10, 1889	53.30	. . . . . A. Shellabarger and J. W. Eaton
No. 9 . . . . .	Crestone creek . . . . .	July 24, 1889	May, 1888	56	Quincey A. Shaw
No. 10 . . . . .	Crestone creek . . . . .	July 24, 1889	July, 1888	51.50	
No. 15 . . . . .	Willow creek . . . . .	July 24, 1889	Aug., 1888	38.60	
No. 16 . . . . .	Willow creek . . . . .	July 24, 1889	July, 1888	11.60	
No. 17 . . . . .	Willow creek . . . . .	July 24, 1889	Aug., 1888	11.60	
No. 19 . . . . .	Spanish creek . . . . .	July 24, 1889	Sept., 1888	48.40	
No. 20 . . . . .	Spanish creek . . . . .	July 24, 1889	Sept., 1888	25.45	
No. 22 . . . . .	N. Br. Cottonwood creek . . . . .	July 24, 1889	Sept., 1888	70	
No. 23 . . . . .	Cottonwood creek . . . . .	July 24, 1889	Sept., 1888	30.60	
No. 24 . . . . .	Dead Man creek . . . . .	July 24, 1889	Not given	40.32	
No. 25 . . . . .	N. Br. Dead Man creek . . . . .	July 24, 1889	Not given	45	
No. 26 . . . . .	Dead Man creek . . . . .	July 24, 1889	Not given	20.15	
The Baca Grant Irrigation Ditches . . . . .					

	Aug. 2, 1889	May, 1888	3.82	
The H. Harrison Irrigation Ditch . . . . .	Aug. 2, 1889	Aug. 2, 1889	1,000	H. A. Harrison
The Durkee Canal . . . . .	Aug. 7, 1889	Not given	19	William W. Durkee
The McDonough Ditch . . . . .	Aug. 14, 1889	July 28, 1889	3.969	John McDonough
The Douglas Irrigating Ditch . . . . .	Aug. 15, 1889	April 1, 1883	11	Bettie M. Douglas
The White Ditch . . . . .	Aug. 17, 1889	May 24, 1888	30.125	J. M. White
The Arthur Young Ditch . . . . .	Aug. 20, 1889	May 10, 1888	2.98	John Young and T. A. Young
The Dorsey Irrigating Ditch No. 1 . . . . .	Aug. 24, 1889	May 20, 1888	2.43	Joel Dorsey
The Dorsey Irrigating Ditch No. 2 . . . . .	Aug. 24, 1889	June 10, 1888	2.71	Joel Dorsey
The Dorsey Irrigating Ditch No. 3 . . . . .	Dec. 10, 1889	April 19, 1889	12	Alfred F. Jardon
The Jardon Ditch . . . . .	Dec. 28, 1889	April 19, 1889	5	A. M. Green
The A. M. Green Irrigation Ditch No. 1 . . . . .	Dec. 23, 1889	April 19, 1889	2.50	A. M. Green
The A. M. Green Irrigation Ditch No. 2 . . . . .	Jan. 4, 1890	Dec. 16, 1889	4	E. C. Hill
The Hill Ditch . . . . .	Feb. 7, 1890	Spring, 1889	20	Mary A. Stratton
The Stratton Ditch . . . . .	Feb. 7, 1890	Spring, 1889	14	Hugo Henkanfer
The Spring Ditch . . . . .	April 10, 1890	April 4, 1888	4.14	John Baker
The Henkanfer Ditch . . . . .	April 23, 1890	April 10, 1886	400 inches	The San Luis Hot Springs Land Co.
The John Baker Ditch . . . . .	June 5, 1890	July 20, 1889	2.15	The San Luis Hot Springs Land Co
The San Luis Hot Springs Ditch No. 1 . . . . .	June 5, 1890	July 20, 1889	1.40	Levi T. Durbin
The San Luis Hot Springs Ditch No. 2 . . . . .	June 5, 1890	Not given	2.94	L. T. Durbin and William J. King
The Durbin Extension, or the San Luis Hot Springs Ditch No. 1 . . . . .	June 18, 1890			
The Durbin and King Ditch . . . . .				



## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 25, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Richard Cooper Reservoir . .	Not given . . . . .	Not given . . . . .	Jan 16, 1889	Not given .	64,000,000	. . . . . Richard Cooper

*Water District No. 26*—Riley M. Edwards, Commissioner. No report.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 26, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Udell & Means Ditch, Winger enlargement . . . . .	Sullivan Arroya . . . .	Dec. 18, 1888	Dec. 3, 1888	20	Albert C. Winger
The Phillips Extension Ditch . . . . .	Bergfeldt Arroya . . .	Dec. 22, 1888	Sept. 20, 1888	4	Charles B. Phillips
The Miely Ditch, Runkles extension . . . . .	Bergfeldt Arroya . . .	Dec. 27, 1888	June, 1888	3	Jacob P. Runkles
The Goodwin Ditch . . . . .	Sawatch river . . . .	Dec. 27, 1888	Spring, 1882	7	William H. Goodwin <i>et al</i>
The Udell & Means Ditch extension . . . . .	Sullivan Arroya . . . .	Dec. 27, 1888	Not given	15	William Silzel
The Timber Lake Ditch . . . . .	Sawatch creek . . . .	Jan. 8, 1889	Nov. 27, 1888	49	A. B. & W. H. Townsend
The Travis Ditch No. 2 . . . . .	Saguache river . . . .	Jan. 8, 1889	Nov., 1888	4	San Isabel Land & Live Stock Co
The Travis Ditch No. 3 . . . . .	Saguache river . . . .	Jan. 8, 1889	Nov., 1888	5	San Isabel Land & Live Stock Co
The Chico Angle Ditch . . . . .	Bergfeldt Arroya . . .	Jan. 23, 1889	Jan. 8, 1889	5	Thomas B. Goodwin
The Phillips Ditch No. 1, enlargement . . . . .	Bergfeldt Arroya . . .	Jan. 23, 1889	Dec. 15, 1888	8	John H. Fultz
The Dummermuth Extension Ditch . . . . .	Sawatch river . . . .	Jan. 23, 1889	Jan. 1, 1889	3.60	John Dummermuth
The Pace Ditch . . . . .	Luengen Arroya . . .	Mar. 5, 1889	May, 1888	3	E. A. Pace
The Penny Enlargement of the Dummermuth Extension of The Ball Ditch . . . . .	Luengen Arroya . . .	Mar. 5, 1889	Not given	8	G. A. Penney
The enlargement and extension of the Turnbull & Luengen Ditch . . . . .	Saguache creek . . .	April 4, 1889	Feb. 21, 1889	10	H. C., J. W. & E. A. Raybell
The Pitzer Ditch . . . . .	Russell Arroya . . . .	April 23, 1889	Jan. 29, 1889	10.60	Johnson M. Pitzer <i>et al</i>

The McLane Ditch . . . . .	Saguache creek . . . . .	May 22, 1889	April, 1889	4	..... G. W. McLane
The Pitzer Ditch Enlargement . . . . .	Russell arroya . . . . .	May 24, 1889	April 1, 1889	4.80	..... Andrew J. Lyons
The J. D. Keith Irrigation Ditch . . . . .	Ashley arroya . . . . .	June 26, 1889	June 5, 1889	3.42	..... Jefferson D. Keith
The Marshall Ditch . . . . .	Sawatch river . . . . .	June 29, 1889	Spring, 1884	25	..... Samuel and Warren S. Joy
The Qualls & Co. Ditch . . . . .	Sawatch creek . . . . .	June 29, 1889	May 3, 1889	12	..... R. F. Pace <i>et al</i>
The McConney & Spencer Ditch . . . . .	Russell arroya . . . . .	July 5, 1889	May 3, 1889	7.50	..... James M. McConney <i>et al</i>
The Osgood Ditch, enlargement . . . . .	Sawatch river . . . . .	July 30, 1889	Spring, 1882	7	..... J. S. Stow <i>et al</i>
The Osgood Ditch, Gish extension . . . . .	Sawatch river . . . . .	July 30, 1889	June, 1889	3.50	..... Timothy P. Gish
The McConney & Spencer Ditch, enlarge.	Obergtellar arroya . . . . .	Aug. 26, 1889	June 14, 1889	4	..... Richard B. Hunt
The Cross Creek Ditch . . . . .	Cross creek . . . . .	Sept. 7, 1889	July, 1888	44	..... Henry Freise
The Jack Ditch . . . . .	Jack creek . . . . .	Sept. 7, 1889	April, 1889	4	..... Henry Freise
The Sholtz Ditch . . . . .	Obergfeld arroya . . . . .	Nov. 6, 1889	May, 1889	3	..... Henry Sholtz
The Gambill & Coleman Ditch . . . . .	Luengen arroya . . . . .	Dec. 11, 1889	April, 1889	11.50	..... B. A. Gambill <i>et al</i>
The Zeigler Brothers Ditch, the Kelley extension of . . . . .	Saguache creek . . . . .	Dec. 13, 1889	Nov. 8, 1889	4	..... John Kelley
The Holmes Ditch . . . . .	Holcomb arroya . . . . .	Mar. 7, 1890	July 8, 1889	4.75	..... Jasper N. Reed <i>et al</i>
The McLucas Ditch . . . . .	Luengen arroya . . . . .	Mar. 22, 1890	Spring, 1883	8.50	..... W. H. McLucas
The Stowe Ditch, enlargement . . . . .	Saguache river . . . . .	April 9, 1890	May 3, 1889	15	..... J. N. Kincaid
The Al. Hill Ditch . . . . .	{ Spring branch of the Russell arroya	April 23, 1890	Mar. 22, 1890	12.10	..... A. A. Hill
The Robert Cooke Ditch . . . . .	Saguache creek . . . . .	June 6, 1890	Jan. 6, 1890	3.70	..... Robert Cooke
The Slaue Ditch . . . . .	Saguache creek . . . . .	July 8, 1890	Spring, 1888	7	..... Daniel Slaue
The Ball Ditch, the Dummermuth extension No. 2 of . . . . .	Saguache creek . . . . .	Aug. 4, 1790	July 9, 1890	3.60	..... William Dummermuth

*Water District No. 27*—Mark Bedell, Commissioner.

No report.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 27, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL,	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Kirkendall Ditch No. 2 . . . . .	Bergfeldt Arroya . . . . .	Mar. 6, 1889	June 18, 1888	7	J. F. Mitchell
The San Juan Gulch Ditch * . . . .	San Juan gulch c'k . . . . .	May 24, 1889	April 20, 1882	1.68	William Gent
The La Garita Feeder to the Rio Grande Canal . . . . .	La Garita creek . . . . .	July 9, 1889	June 12, 1889	183.30	The Rio Grande Land and Canal Company
The Lake Ditch . . . . .	Davis Lake . . . . .	Oct. 3, 1889	June 20, 1889	33	Lawrence Weedon <i>et al</i>
The Duckett Ditch . . . . .	Cochetopa creek . . . . .	Oct. 3, 1889	. . . . .	. . . . .	R. H. Duckett
The Epps Ditch . . . . .	{ So. Fork Carnero creek . . . . . }	Mar. 19, 1890	May 1888	14	Frank Epps
The Beihl Ditch . . . . .	Carnero creek . . . . .	April 9, 1890	Spring, 1880	6	Johu Beihl
The McKeehan Ditch . . . . .	Carnero creek . . . . .	June 21, 1890	March, 1887	11.27	Joseph L. Murray

\* This statement was mailed at Saguache, May 10, 1889, and laid in the private office of J. S. Greene, Ex-State Engineer, from May 12 to May 24, 1889, before being filed in this office.





*Water District No. 35*—Has no Water Commissioner.

## STATEMENT CONCERNING DITCHES.

IN WATER DISTRICT No. 35, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Cottonwood Ditch . . . . .	Sangre de Cristo creek.	June 21, 1889	June 1, 1889	14	W. H. Meyer, Chas. John & Ed C. van Diest
The John Ditch . . . . .	Sangre de Cristo creek.	Sept. 23, 1889	May 21, 1889	10	Charles, John & Edmond C. van Diest
The Meadow Ditch . . . . .	Trinchera creek . . . . .	Nov. 23, 1889	Oct. 24, 1888	2.16	Michael J. McCarthy
The Johnny Ditch . . . . .	Trinchera creek . . . . .	Nov. 23, 1889	Sept., 1874	2.28	Michael J. McCarthy & Cyrus L. Cowgill
The Home Ditch . . . . .	Trinchera creek . . . . .	Nov. 23, 1889	. . . . . 1873	2.34	Michael J. McCarthy & Cyrus L. Cowgill
The Spring Ditch . . . . .	S. Trinchera creek . . . . .	Nov. 23, 1889	June, 1883	1.42	Michael J. McCarthy
The "Cowgill-McCarthy" Ditch . . . . .	S. Trinchera creek . . . . .	Nov. 23, 1889	May 1, 1873	4	Michael J. McCarthy & Cyrus L. Cowgill
The Fred Etter Ditch . . . . .	Ute creek . . . . .	Dec. 6, 1889	{ May, 1885 Mar. 1, 1883	10 5	Frederick Etter
The Hughes Ditch No. 1 . . . . .	Trinchera creek . . . . .	Jan. 4, 1890	June, 1887	5	Cassius C. Kerr
The Alamos Altos Ditch . . . . .	Trinchera creek . . . . .	Jan. 4, 1890	April 5, 1889	2.25	Cassius C. Kerr
The Notley Ball Overflow <sup>2</sup> Ditch . . . . .	Trinchera creek . . . . .	Jan. 20, 1890	Oct. 10, 1889	107.50	Notley Ball

## STATEMENT CONCERNING EXISTING RESERVOIRS

IN WATER DISTRICT No. 35, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Spring Ditch Reservoir . . . . .	S. Trinchera creek	Spring Ditch . . .	Nov. 23, 1889	June, 1883	11,700	Michael J. McCarthy
The Cowgill-McCarthy Reservoir . . . . .	S. Trinchera creek	{ Cowgill-McCarthy Ditch . . . }		{ May 1, 1873 }	9,000	

SAN JUAN DIVISION No. 4.

---

John P. Costan, of Durango, was appointed Superintendent of this division June 26, 1890.

Water Districts Nos. 29, 30, 31, 32, 33 and 34 are included in this division.

Alonzo P. Edmondson, of Mancos, was appointed Commissioner of No. 34, but the remaining districts are without Commissioners.

No reports have been received.

District No. 29 shall consist of all lands lying in the State of Colorado, irrigated from ditches or canals taking water from that part of the San Juan river and its tributaries which lie above the junction of the San Juan river and the Rio Piedra, and including the Rio Piedra.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 29, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890,

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Ufford and Price Ditch . . . . .	Not given . . . . .	May 2, 1889	April 24, 1889	4	. . . . . J. S. Ufford and C. W. Price
The Dyke Ditch No. 1 . . . . .	Nutra creek . . . . .	Aug. 28, 1889	July 1, 1884	5	. . . . . Lena Dyke
The Dyke Ditch No. 2 . . . . .	Nutra creek . . . . .	Aug. 20, 1889	May 10, 1886	5	. . . . . Joseph Dyke



*District No. 30* shall consist of all lands lying in the State of Colorado irrigated from ditches or canals taking water from that part of the Rio Las Animas and its tributaries which lie in Colorado.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 30, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Florida Mesa Ditch . . . . .	Florida river . . . . .	Jan 4, 1889	Dec. 22, 1888	500	. . . . . The Florida Mesa Ditch Company
The Campion Ditch . . . . .	Florida river . . . . .	Jan. 7, 1889	April 1, 1882	1.50	. . . . . Michael Campion
The Hall-Idle Ditch . . . . .	Rio Las Animas . . . . .	Jan. 8, 1889	Spring, 1880	2.25	. . . . . Charles Idle <i>et al</i>
The Lightner Creek Ditch . . . . .	Lightner creek . . . . .	Feb. 15, 1889	Feb. 4, 1889	110	. . . . . The Lightner Creek Ditch Company
The Florida Farmers' Ditch . . . . .	Florida river . . . . .	May 4, 1889	Dec. 6, 1883	40	. . . . . The Florida Farmers' Ditch Company
The Florida Farmers' Ditch enlargement . . . . .	Florida river . . . . .	May 4, 1889	Feb. 15, 1889	25	. . . . . The Florida Farmers' Ditch Company
The Ayers Mill Ditch . . . . .	Pine river . . . . .	July 16, 1889	Dec. 31, 1888	500	. . . . . The Ayer's Mill Ditch Company

*District No. 31* shall consist of all lands in the State of Colorado irrigated from ditches or canals taking water from that part of the Los Piños river and its tributaries which lie in Colorado.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 31, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Wallace Gulch Ditch . . . .	Wallace gulch . . .	Jan. 28, 1889	Spring, 1880	3	. . . . . Charles M. Ayres
The West Mesa Ditch . . . . .	Rio de los Piños . .	Feb. 6, 1889	Nov. 22, 1883	450	. . . . . The West Mesa Ditch Company
The Impson Ditch . . . . .	Rio de los Piños . .	Mar. 24, 1890	April 1, 1882	3	. . . . . Fred Aderhold and Jacob C. Impson

*District No. 32* shall consist of all lands in the State of Colorado irrigated by water taken from those natural streams which drain into the San Juan river, and are not included in Water Districts number 29, 30, 31, 33 and 34.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 32 RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The May Lateral Ditch Co.'s Ditch . . . .	Alkali creek . . . .	Dec. 24, 1888	Nov. 29, 1888	25	. . . The May Lateral Ditch Company



*District No. 33* shall consist of all lands lying in the State of Colorado irrigated from ditches or canals taking water from the La Plata river and its tributaries which lie in Colorado.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 33, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Parrott City Gold Placer Mining and } Water Power Co.'s Ditch . . . . . }	La Plata river . .	Jan. 9, 1889	Sept., 1879	Not given	{ The Parrott Gold Placer Mining and Water Power Co.
The Cherry Creek Mesa Ditch . . . . . }	Cherry creek . .	Feb. 8, 1889	1883	1.50	. . . . . Herman R. Sahr
The La Plata Irrigating Ditch . . . . . }	La Plata river . .	June 26, 1889	May 21, 1889	600	. . . . . Robert C. Prewitt
The Parrott Ditch . . . . . }	La Plata river . .	July 5, 1889	Spring, 1876	3	. . . . . William T. Vailes
The Spring Creek Ditch . . . . . }	Spring creek . .	July 12, 1889	May 1, 1885	1.50	. . . . . Joseph Schatz
The John Spousel Ditch . . . . . }	Spring creek . .	Sept. 24, 1889	May 1, 1888	3	. . . . . John Spousel
The La Plata River and Cherry Creek Ditch	La Plata river . .	July 26, 1890	June 2, 1890	250	{ The La Plata River and Cherry Creek Ditch Co.

*District No. 34* shall consist of all lands lying in the State of Colorado irrigated from ditches or canals taking water from the Rio Mancos and its tributaries.

WATER DIVISION No. 5.

---

E. B. SAWYER, SUPERINTENDENT, MONTROSE, COLO.

Water Division No. 5 embraces a large extent of territory.

The Superintendent reports for 1889, as follows:

The statistics are not as full as I could wish, owing, partially to the size of the water districts and the inability of Commissioners to secure competent assistants, due to the low schedule of wages allowed for such service, as well as many other obstacles to be met with in a new division, not the least of which is, the refusal on the part of some of the farmers to give such information when asked by the Commissioners to do so.

In districts 28, 36, 50, 51, 52, 53, 59, no adjudications have taken place, nor have any appointments of Commissioners been made.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 29, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Hot Springs Creek Ditch No. 1 . . . . .	Hot Springs creek . . . . .	Dec. 4, 1888	Not stated	5	Joseph F. McDonald <i>et al</i>
The Hot Springs Creek Ditch No. 2 . . . . .	Hot Springs creek . . . . .	Dec. 4, 1888	Not stated	5	Joseph F. McDonald <i>et al</i>
The McCaune Ditch No. 1 . . . . .	Tomichi river . . . . .	Dec. 9, 1888	Nov. 1, 1887	50	D. J. McCaune and Louis Cortay
The McCaune Ditch No. 2 . . . . .	Tomichi river . . . . .	Dec. 9, 1888	Nov. 1, 1887	50	D. J. McCaune and Louis Cortay
The McCaune Ditch No. 3 . . . . .	Tomichi river . . . . .	Dec. 9, 1888	Nov. 1, 1887	50	D. J. McCaune and Louis Cortay
The Funk Ditch . . . . .	Pass creek . . . . .	Dec. 18, 1888	Oct. 1, 1888	3	William F. Funk
The Skues Ditch . . . . .	Hot Springs creek . . . . .	Dec. 27, 1888	Nov. 16, 1888	2.31	W. L. Bennett and H. J. Morton
The Crary Ditch . . . . .	Cochetopa creek . . . . .	Dec. 27, 1888	Oct. 13, 1888	20	Noah T. Crary
The Home Ditch . . . . .	Cochetopa creek . . . . .	Jan. 8, 1889	Spring, 1882	10	H. C. Crary
The Pass Creek Ditch . . . . .	Pass creek . . . . .	Jan. 8, 1889	Spring, 1882	10	H. C. Crary
The Hartman Ditch No. 1 . . . . .	Stubbs gulch . . . . .	Feb. 19, 1889	Spring, 1876	15	Alonzo Hartman
The Hartman Ditch No. 2 . . . . .	Stubbs gulch . . . . .	Feb. 19, 1889	Spring, 1877	15	Alonzo Hartman
The L. L. Bush Ditch No. 1 . . . . .	Hot Springs creek . . . . .	Feb. 25, 1889	Jan. 12, 1889	1.74	L. L. Bush
The L. L. Bush Ditch No. 2 . . . . .	Hot Springs creek . . . . .	Feb. 25, 1889	Jan. 12, 1889	1.65	L. L. Bush
The L. L. Bush Ditch No. 3 . . . . .	Hot Springs creek . . . . .	Feb. 25, 1889	Jan. 12, 1889	1.74	L. L. Bush

The L. L. Bush Ditch No. 4. . . . .	Hot Springs creek	Feb. 25, 1889	Jan. 12, 1889	1.87	. . . . . L. L. Bush
The L. L. Bush Ditch No. 5. . . . .	Hot Springs creek	Feb. 25, 1889	Jan. 12, 1889	1.45	. . . . . L. L. Bush
The Geyser Flume and Ditch. . . . .	Quartz creek. . .	April 19, 1889	April 11, 1889	50	. . . . . Caleb G. Collins
The Gullett Tomichi Irrigating Ditch	Tonichi river. . .	May 9, 1889	Feb. 10, 1889	36	. . . . . Susannah Gullett <i>et al.</i>
The Eisen Vader Irrigating Ditch . .	Tonichi river. . .	May 15, 1889	Not stated	9	. . . . . John P. Eisen and Palmer H. Vader
Unnamed. . . . .	Tonichi river. . .	June 5, 1889	May 1, 1887	2.20	. . . . . J. B. Coats
Unnamed. . . . .	Tonichi river. . .	June 5, 1889	May 1, 1887	3	. . . . . J. B. and A. B. Coats
Unnamed. . . . .	Quartz creek. . .	July 3, 1889	April 10, 1886	7.48	. . . . . E. A. Lockwood
The Eastman Enlargement and Extension of E. A. Lockwood's Ditch }	Quartz creek. . .	July 25, 1889	May 29, 1889	5.52	. . . . . George W. Eastman
The G. R. Crane Mill Ditch. . . . .	Ohio creek. . . . .	July 31, 1889	July 16, 1889	5.27	. . . . . G. R. Crane
The Duckett Ditch. . . . .	Cochetopa creek. .	Oct. 3, 1889	June 1, 1887	108	. . . . . Richard H. Duckett
The Cole Ditch No. 1. . . . .	Tonichi creek. . .	Dec. 23, 1889	Oct. 28, 1889	2.60	. . . . . Eugene O. Cole
The Cole Ditch No. 2. . . . .	Tonichi creek. . .	Dec. 23, 1889	Oct. 28, 1889	2.60	. . . . . Eugene O. Cole
The Cole Ditch No. 3. . . . .	Tonichi creek. . .	Dec. 23, 1889	Oct. 28, 1889	2.60	. . . . . Eugene O. Cole
The Del Clark Ditch. . . . .	Tonichi creek. . .	Jan. 2, 1890	July 15, 1888	6.35	. . . . . Dell F. Clark
The Richardson Ditch No. 1. . . . .	Cochetopa creek. .	Jan. 30, 1890	Spring, 1882	7.50	. . . . . J. H. Richardson
The Richardson Ditch No. 2. . . . .	Pass creek. . . . .	Jan. 30, 1890	Spring, 1882	8.75	. . . . . J. H. Richardson
The J. B. Coats Ditch No. 1. . . . .	Tonichi creek. . .	July 26, 1890	May 1, 1884	2.20	. . . . . J. B. Coats
The J. B. Coats Ditch No. 2. . . . .	Tonichi creek. . .	July 26, 1890	May 1, 1887	2.20	. . . . . J. B. Coats
The Coats Brothers Ditch. . . . .	Tonichi creek. . .	July 26, 1890	May 1, 1887	3	. . . . . J. B. and A. B. Coats
The A. B. Coats Ditch. . . . .	Razor creek. . . .	July 26, 1890	May 1, 1878	2.50	. . . . . A. B. Coats



*Water District No. 37*—A. B. Ferguson, Commissioner, Gypsum.

Mr. Ferguson reports that he was not called out, there being an abundance of water.

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 37, PREPARED BY THE SUPERINTENDENT OF IRRIGATION OF WATER DIVISION No. 3, FROM THE CERTIFIED COPY OF THE DECREE GOVERNING APPROPRIATIONS IN THIS DISTRICT, FURNISHED BY THE CLERK OF THE DISTRICT COURT.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Stratton & Co. Ditch . . . . .	Gypsum creek . . . . .	July 1, 1881	10	. . . . .	. . . . .	. . . . .	1
The Daggett & Parker Ditch. . . . .	Gypsum creek . . . . .	April 30, 1882	5	. . . . .	10	. . . . .	2
The White Ditch . . . . .	Brush creek . . . . .	May 1, 1882	2.40	. . . . .	15	. . . . .	3
The Sutton Ditch. . . . .	Brush creek . . . . .	May 1, 1882	4	. . . . .	17.40	. . . . .	4
The Hernage Ditch . . . . .	Brush creek . . . . .	May 1, 1882	2.40	. . . . .	21.40	. . . . .	5
The Grandell Bros. Ditch . . . . .	Gypsum creek . . . . .	May 21, 1882	3.10	. . . . .	23.80	. . . . .	6
The Stratton & Co. Ditch, second appropriation. . . . .	Gypsum creek . . . . .	Oct. 8, 1882	3.20	13.20	26.90	. . . . .	7
The McBrayer & Fenner Ditch . . . . .	Gypsum creek . . . . .	Mar. 1, 1883	.60	. . . . .	30.10	. . . . .	8
The Abrams Ditch . . . . .	Abrams creek . . . . .	Mar. 15, 1883	2	. . . . .	30.70	. . . . .	9
The Phillips Ditch . . . . .	Gypsum creek . . . . .	April 1, 1883	1	. . . . .	32.70	. . . . .	10
The Chatfield & Bartholomew Ditch . . . . .	Gypsum creek . . . . .	May 15, 1883	1.80	. . . . .	33.70	. . . . .	11
The Noorgaard Ditch. . . . .	Gypsum creek . . . . .	May 30, 1883	1.80	. . . . .	35.50	. . . . .	12

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Matthews Ditch . . . . .	Brush creek . . . . .	June 1, 1883	1.80	. . . . .	37.30	. . . . .	13
The McBrayer & Fenner Ditch, second appropriation . . . . .	Gypsum creek . . . . .	June 20, 1883	1.30	1.90	39.10	. . . . .	14
The Sutton Ditch, second appropriation . . . . .	Brush creek . . . . .	Sept. 1, 1883	.50	4.50	40.40	. . . . .	15
The F. M. S. Ditch . . . . .	Gypsum creek . . . . .	Mar. 1, 1884	.24	. . . . .	40.90	. . . . .	16
The Edwards Ditch . . . . .	Brush creek . . . . .	April 15, 1884	2.20	. . . . .	41.14	. . . . .	17
The South Ditch . . . . .	Brush creek . . . . .	April 29, 1884	.60	. . . . .	43.34	. . . . .	18
The Stratton & Co. Ditch, third appropriation . . . . .	Gypsum creek . . . . .	April 30, 1884	3.20	16.40	43.94	. . . . .	19
The Ditch No. 2 Ditch . . . . .	Brush creek . . . . .	May 1, 1884	1.80	. . . . .	47.14	. . . . .	20
The Sherwood Ditch . . . . .	Milk creek . . . . .	June 1, 1884	3	. . . . .	48.94	. . . . .	21
The McBrayer Ditch . . . . .	Gypsum creek . . . . .	June 1, 1884	2.30	. . . . .	51.94	. . . . .	22
The Squires & Hammond Ditch . . . . .	Brush creek . . . . .	June 1, 1884	1.20	. . . . .	54.24	. . . . .	23
The Frost Ditch . . . . .	Brush creek . . . . .	June 15, 1884	1.20	. . . . .	55.44	. . . . .	24
The Castle Ditch . . . . .	Castle creek . . . . .	June 18, 1884	.40	. . . . .	56.64	. . . . .	25
The Berry Ditch . . . . .	Berry creek . . . . .	July 24, 1884	3.20	. . . . .	57.04	. . . . .	26
The McBrayer & Fenner Ditch, third appropriation . . . . .	Gypsum creek . . . . .	Oct. 12, 1884	.60	2.50	60.24	. . . . .	27

The Alkali Ditch . . . . .	Alkali creek . . . . .	Nov. 15, 1884	3.20	60.84	28
The Skiff and Schliff Ditch. . . . .	Gypsum creek . . . . .	April 1, 1885	.90	64.04	29
The Stratton & Co. Ditch, fourth appropriation . . . . .	Gypsum creek . . . . .	April 1, 1885	1.20	64.94	30
The Johnson Ditch. . . . .	Spring creek . . . . .	April 5, 1885	.80	66.14	31
The Warren Ditch . . . . .	Eagle river. . . . .	April 20, 1885	3.70	66.94	32
The Groff Ditch . . . . .	Spring creek . . . . .	April 30, 1885	.30	70.64	33
The Noorgaard Ditch, second appropriation. . . . .	Gypsum creek . . . . .	May 30, 1885	.90	70.94	34
The Ferguson Ditch . . . . .	Old Mau's Gulch creek . . . . .	June 20, 1885	.22	71.84	35
The Daggett & Parker Ditch, second appropriation. . . . .	Gypsum creek . . . . .	Sept. 1, 1885	3	72.56	36
The Win & Co. Ditch. . . . .	Gypsum creek . . . . .	Oct. 3, 1885	6.22	75.56	37
The Ferguson Ditch, second appropriation . . . . .	Old Mau's Gulch creek. . . . .	. . . . .	. . . . .	. . . . .	38(?)
The Ditch No. 4 Ditch . . . . .	Brush creek . . . . .	May 1, 1886	1.20	81.78	39
The A. F. Grundell Ditch . . . . .	Gypsum creek . . . . .	June 30, 1886	.80	82.98	40
The Stratton & Co. Ditch, fifth appropriation . . . . .	Gypsum creek . . . . .	June 8, 1886	2	83.78	41
The Stratton & Co. Ditch, sixth appropriation. . . . .	Gypsum creek . . . . .	July 15, 1886	3.20	85.78	42
The F. M. Skiff Ditch . . . . .	Gypsum creek . . . . .	July 23, 1886	.70	88.98	43
The Miller Ditch . . . . .	Gypsum creek . . . . .	Feb 1, 1886	2	89.68	44
The Chatfield & Bartholomew Ditch, second appropriation. . . . .	Gypsum creek . . . . .	Aug. 31, 1886	.95	91.68	44a
The Sherwood Ditch, second appropriation . . . . .	Milk creek . . . . .	Oct. 1, 1886	1	92.63	45
The Chatfield & Bartholomew Ditch, third appropriation. . . . .	Gypsum creek . . . . .	Oct. 30, 1886	.85	93.63	46
The Chatfield & Bartholomew Ditch, fourth appropriation . . . . .	Gypsum creek . . . . .	Mar. 16, 1887	3	94.48	47
The Chatfield & Bartholomew Ditch, fifth appropriation . . . . .	Gypsum creek . . . . .	Mar. 20, 1887	2	97.48	48

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of acres to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Chatfield & Bartholomew Ditch, sixth appropriation . . . . .	Gypsum creek . . . . .	. . . . .	.40	9	99.48	. . .	48a
The Chatfield & Bartholomew Ditch, seventh appropriation . . . . .	Gypsum creek . . . . .	Mar. 30, 1887	3.10	12.10	99.88	. . .	49
The Hernage Ditch, second appropriation . . . . .	Brush creek . . . . .	Mar. 30, 1887	1.20	3.60	102.98	. . .	50
The Ditch No. 1 Ditch . . . . .	Brush creek . . . . .	April 1, 1887	2.60	. . . . .	104.18	. . .	51
The Ditch No. 3 Ditch . . . . .	Brush creek . . . . .	April 1, 1887	3.04	. . . . .	106.78	. . .	52
The Brett Ditch . . . . .	Sake creek . . . . .	April 1, 1887	3	. . . . .	109.82	. . .	53
The Mills Ditch . . . . .	Brush creek . . . . .	May 1, 1887	.70	. . . . .	112.82	. . .	54
The McKinzie Ditch . . . . .	Brush creek . . . . .	May 15, 1887	3	. . . . .	113.52	. . .	55
The Freeman Ditch . . . . .	Muddy creek . . . . .	June 1, 1887	2	. . . . .	116.52	. . .	56
The H. O. R. Ditch. . . . .	Gypsum creek . . . . .	Aug. 26, 1887	4	. . . . .	118.52	. . .	57
The Neubauer Ditch . . . . .	Gypsum creek . . . . .	Sept. 30, 1887	.40	. . . . .	122.52	. . .	58
The Wilkinson Ditch. . . . .	Eagle river. . . . .	Oct. 30, 1887	3.40	. . . . .	122.92	. . .	59
The Matthews Ditch, second appropriation . . . . .	Brush creek . . . . .	Feb. 1, 1888	1.80	3.60	126.32	. . .	60
The Chatfield & Bartholomew Ditch, eighth appropriation . . . . .	Gypsum creek . . . . .	Feb. 8, 1888	1	13.10	128.22	. . .	61
The Daggett & Parker Ditch, third appropriation. . . . .	Gypsum creek . . . . .	Mar. 5, 1888	2.50	10.50	129.22	. . .	62



The Skiff and Schliff Ditch, second appropriation . . . . .	Gypsum creek . . . . .	Mar. 5, 1888	.20	1.10	121.72	63
The McBrayer and Fenner Ditch, fourth appropriation . . . . .	Gypsum creek . . . . .	April 11, 1888	.20	2.70	131.92	64
The Chatfield and Bartholomew Ditch, ninth appropriation . . . . .	Gypsum creek . . . . .	April 15, 1888	2.40	15.50	132.12	65
The Noorgaard Ditch, third appropriation . . . . .	Gypsum creek . . . . .	April 30, 1888	.50	3.20	134.52	66
The H. O. R. Ditch, second appropriation . . . . .	Gypsum creek . . . . .	May 1, 1888	1	. . . .	135.02	67
The Skiff and Schliff Ditch, third appropriation . . . . .	Gypsum creek . . . . .	May 1, 1888	.60	1.70	136.02	68
The Mesa Ditch . . . . .	Gypsum creek . . . . .	June 30, 1888	6	. . . .	136.62	69
The Neubauer Ditch, second appropriation . . . . .	Gypsum creek . . . . .	July 15, 1888	.30	.70	142.62	70
The Tonis Ditch . . . . .	Gypsum creek . . . . .	July 30, 1888	.24	. . . .	142.92	71
The Chatfield and Bartholomew ditch, tenth appropriation . . . . .	Gypsum creek . . . . .	Oct. 1, 1888	3	18.50	143.16	72
The F. M. Skiff Ditch, second appropriation . . . . .	Gypsum creek . . . . .	Feb. 1, 1889	.80	1.50	146.16	73
The Eby Creek Ditch . . . . .	Eby creek . . . . .	Mar. 15, 1889	1.80	. . . .	146.96	74
The Nelson Ditch . . . . .	Gulch, unnamed . . . . .	April 1, 1889	1	. . . .	148.76	75
The O. I. F. Ditch . . . . .	Brush creek . . . . .	April 1, 1889	.50	. . . .	149.76	76
The Win & Co. Ditch, second appropriation . . . . .	Gypsum creek . . . . .	April 1, 1889	1.12	7.34	150.26	77
The Muddy Ditch . . . . .	Muddy creek . . . . .	April 5, 1889	3.20	. . . .	151.38	78
The Squires Hammond Ditch, second appropriation . . . . .	Brush creek . . . . .	May 7, 1889	2.60	3.80	154.58	79
The Fooshee Ditch . . . . .	Tunnel creek . . . . .	May 10, 1889	1.80	. . . .	157.18	80
The H. and H. Ditch . . . . .	Brush creek . . . . .	June 30, 1889	.40	. . . .	158.98	81
The Matthew Ditch, third appropriation . . . . .	Brush creek . . . . .	July 30, 1889	1.40	5	159.38	82
The J. M. Dodd Ditch . . . . .	Sake creek . . . . .	July 30, 1889	3.20	. . . .	160.78	82a
The Love and White Ditch . . . . .	Brush creek . . . . .	July 31, 1889	2.20	. . . .	163.98	83



## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH OR CANAL.	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to canal or reservoir	Cubic feet per second appropriated in district	No. on stream	Order of priority in district
The Stratton & Co. Ditch, seventh appropriation . . . . .	Gypsum creek . . . . .	Aug. 1, 1889	1.30	24.60	166.18	..	84
The Mesa Ditch, second appropriation . . . . .	Gypsum creek . . . . .	Aug. 2, 1889	3.20	9.20	167.98	..	85
The H. O. R. Ditch, third appropriation . . . . .	Gypsum creek . . . . .	Aug. 6, 1889	1.80	6.80	171.18	..	86
The Grandell Brothers Ditch, second appropriation . . . . .	Gypsum creek . . . . .	Aug. 6, 1889	1.10	4.20	172.98	..	87
The Hernage Ditch, third appropriation . . . . .	Brush creek . . . . .	Aug. 21, 1889	.28	3.88	174.08	..	88
The Dall Ditch . . . . .	Hardscrabble creek . . . . .	Aug. 22, 1889	1.60	..	174.36	..	89
The Groff Ditch, second appropriation . . . . .	Spring creek No. 2 . . . . .	Sept. 9, 1889	6.10	6.40	175.96	..	90
The Hernage Ditch, fourth appropriation . . . . .	Brush creek . . . . .	Oct. 1, 1889	.40	4.28	182.06	..	91
The White Ditch, second appropriation . . . . .	Brush creek . . . . .	Oct. 3, 1889	1	3.40	182.46	..	92
The White Ditch, third appropriation . . . . .	Brush creek . . . . .	Oct. 3, 1889	1.20	4.60	183.46	..	93
The Borah Ditch . . . . .	Brush creek . . . . .	Oct. 3, 1889	3.20	..	184.56	..	94
The Warren Ditch, second appropriation . . . . .	Eagle river . . . . .	Oct. 9, 1889	2.40	6.10	187.76	..	95
The Warren Ditch, third appropriation . . . . .	Eagle river . . . . .	Oct. 9, 1889	1.60	7.70	190.16	..	96
Total in district . . . . .	..	..	..	..	191.76	..	..

# STATEMENTS CONCERNING DITCHES

51

IN WATER DISTRICT No. 37, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DEEDS HAVE AS YET BEEN ISSUED.

NAME OF DITCH	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Luke Ditch No. 1 . . . . .	Horse creek . . .	Feb. 26, 1889	Not given . .	40 inches	Frank Luke
The Luke Ditch No. 2 . . . . .	Horse creek . . .	Feb. 26, 1889	Not given . .	15 inches	Frank Luke
The Luke Ditch No. 3 . . . . .	Horse creek . . .	Feb. 26, 1889	Not given . .	15 inches	Frank Luke
The Luke Ditch No. 4 . . . . .	Horse creek . . .	Feb. 26, 1889	Not given . .	15 inches	Frank Luke
The McBrayer Main Ditch . . . . .	Gypsum creek . .	Mar. 11, 1889	Not given . .	180 inches	Willis E. McBrayer
The Sease Irrigating Ditch . . . . .	Horse creek . . .	Mar. 12, 1889	April 12, 1888	200 inches	S. S. Sease
The H. D. R. Ditch . . . . .	Gypsum creek . .	Mar. 21, 1889	May 10, 1888	700 inches	Thos. R. Halsell <i>et al</i>
The H. C. & L. Ditch . . . . .	Cattle creek . . .	May 1, 1889	May 1, 1884	1.56 feet	Frank L. Henschkel <i>et al</i>
The Daggart and Parker Ditch, supplementary statement . . . . .	Not given . . . . .	May 18, 1889	Not given . .	18.84	O. W. Daggett
The Newbauer Ditch . . . . .	Gypsum creek . .	June 1, 1889	Not given . .	Not given	F. W. Neubauer
The West Lake Ditch . . . . .	West Lake creek . .	June 29, 1889	June 1, 1889	330 inches	William A. Casteel
The John S. Gibson Ditch . . . . .	Goodson creek . .	July 5, 1889	April 11, 1889	300 inches	John S. Gibson
The Willow Gulch Ditch . . . . .	Willow creek . . .	July 5, 1889	Mar. 26, 1889	160 inches	Charles F. Larzelere
The Hollingsworth & Patten Ditch . . . . .	Salt creek . . . . .	July 12, 1889	April 13, 1889	250 inches	Z. T. Hollingsworth & Company <i>et al</i>

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Skiff Ditch . . . . .	Gypsum creek . . . . .	July 17, 1889	July 28, 1886	4	. . . . . F. M. Skiff
The Terrela Ford Ditch . . . . .	Eagle river . . . . .	Aug. 9, 1889	June 10, 1889	6	. . . . . W. C. Ford <i>et al</i>
The Demmer Ditch . . . . .	Lake creek . . . . .	Sep. 7, 1889	April 5, 18—	3	. . . . . Pierre Demmer
The Foss Ditch . . . . .	June creek . . . . .	Sep. 11, 1889	June 1, 1888	1.50	. . . . . S. E. Foss
The Traer Ditch . . . . .	Traer creek . . . . .	Sep. 11, 1889	June 1, 1887	1.50	. . . . . George E. Traer
The Muddy Ditch . . . . .	Alkali creek . . . . .	Sep. 14, 1889	April 15, 1889	4	. . . . . John Welsh
The Alkali Ditch . . . . .	Alkali creek . . . . .	Sep. 14, 1889	Nov. 15, 1884	4	. . . . . John Welsh
The Booco Ditch . . . . .	Talmage creek . . . . .	Sep. 16, 1889	April 15, 1887	4	. . . . . George B. Booco
The West Lake Creek Ditch . . . . .	West Lake creek . . . . .	Sep. 19, 1889	June 1, 1889	3	. . . . . William A. Casteel
The Casteel Ditch . . . . .	Casteel creek . . . . .	Sep. 19, 1889	May 10, 1887	2	. . . . . William A. Casteel
The Eby Creek Ditch . . . . .	Eby creek . . . . .	Oct. 10, 1889	Mar. 15, 1889	3	. . . . . Orens C. Evans
The Levi Hopper Ditch . . . . .	West Lake creek . . . . .	Oct. 23, 1889	June 1, 1888	3.50	. . . . . Levi Hopper
The Tourville Ditch . . . . .	Lake creek . . . . .	Nov. 12, 1889	April 29, 1889	160 inches	. . . . . Charles Tourville
The Nelson Ditch . . . . .	Grouse creek . . . . .	Nov. 23, 1889	June 20, 1889	3	. . . . . Ben Nelson
The Gilmer Ditch . . . . .	Eagle river . . . . .	Nov. 30, 1889	Nov. 27, 1889	4	. . . . . Thomas B Gilmer
The O. P. Baldwin Extension of White Ditch . . . . .	Brush creek . . . . .	Dec. 16, 1889	Oct. 2, 1889	5	. . . . . O. P. Baldwin
The Graham Ditch . . . . .	Cottonwood creek . . . . .	Dec. 21, 1889	Aug. 1, 1888	2.50	. . . . . Robert Graham

The Stacey Ditch . . . . .	Willow creek . . . . .	Jan. 7, 1890	June 1, 1889	2.75	Not given	Frank Stacey . . . . .
The Livingston Ditch . . . . .	Eagle river . . . . .	Feb. 4, 1890	Not given			William W. Livingston . . . . .
The Nickell Ditch . . . . .	Eagle river . . . . .	Feb. 11, 1890	Sept. 19, 1889	3.50		Charles E. Nickell . . . . .
The Winslow Ditch . . . . .	Berry creek . . . . .	Feb. 18, 1890	Feb. 4, 1890	13		John L. Howard & Gertrude M. Winslow . . . . .
The Howard Ditch . . . . .	Eagle river . . . . .	Feb. 17, 1890	Feb. 3, 1890	5.60		John L. Howard . . . . .
The O. I. F. Ditch . . . . .	Brush creek . . . . .	Mar. 31, 1890	April 1, 1889	4		Oliver Miles . . . . .
The Miles Ditch . . . . .	Brush creek . . . . .	Mar. 31, 1890	May 1, 1887	2		Oliver Miles . . . . .
The O. I. F. Ditch . . . . .	Brush creek . . . . .	April 14, 1890	April 1, 1889	4		Oliver Miles . . . . .
The Miles Ditch . . . . .	Brush creek . . . . .	April 14, 1890	May 1, 1887	2		Oliver Miles . . . . .
The Yoder Ditch . . . . .	Elk creek . . . . .	April 17, 1890	April 12, 1890	4.50		E. S. Yoder . . . . .
The Corcoran Ditch . . . . .	Short creek . . . . .	June 4, 1890	May 13, 1890	2		George M. Corcoran . . . . .
The Eagle Park Ditch . . . . .	Long creek . . . . .	June 4, 1890	May 13, 1890	2		George M. Corcoran . . . . .
The Bottorff Ditch . . . . .	Eagle river . . . . .	June 6, 1890	May 13, 1890	7		A. J. Bottorff <i>et al</i> . . . . .
The Harle Ditch . . . . .	Alkali creek . . . . .	June 6, 1890	May 1, 1890	2.50		Thomas D. Harle . . . . .
The C. M. Ditch . . . . .	Eagle river . . . . .	June 21, 1890	June 2, 1886	4		C. M. White . . . . .
The C. M. White Ditch . . . . .	Brush creek . . . . .	June 21, 1890	Aug. 26, 1889	10		C. M. White . . . . .
The Bottolfsen Ditch . . . . .	Road gulch . . . . .	Sept. 9, 1890	May, 1884	1.50		Erick Bottolfsen . . . . .
The Nottingham & Puder Ditch . . . . .	Eagle river . . . . .	Sept. 26, 1890	April 2, 1889	3		W. H. Nottingham & Peter Puder . . . . .
The Wilkinson Ditch . . . . .	Brush creek . . . . .	Sept. 27, 1890	April 1, 1882	8		John W. Love . . . . .
The Sprague Ditch . . . . .	Willow creek . . . . .	Nov. 8, 1890	Sept. 12, 1890	3		Jas. W. Sprague . . . . .

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 37, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Tip Top Reservoir . . . . .	N. F. K. Coulter c'k	On the stream .	Mar. 25, 1890	May 5, 1889	3,750,000	. . . . . Mrs F. A. Collar

*Water District No. 38*—W. F. Coxhead, Water Commissioner; residence, Carbondale, Garfield county, for 1889, and S. S. Sears, of Carbondale, for 1890.

Mr. Coxhead reports to the Superintendent, for 1889, as having been first called out June 10, 1889, and that he continued in service to September 9, 1889, being employed 56 days during the season, and that two assistants, John F. Peck and John Gregory, were employed 47 days, the service being divided between the counties of Pitkin, Garfield and Eagle. No statistical report was made.

Mr. Sears reports, for 1890, as being called out April 17, and that while there was a scarcity of water for a part of the season, no particular trouble occurred in distributing, nor was there any great amount of loss or inconvenience to consumers.



## COMMISSIONER'S REPORT, A. D. 1890.

DIVISION NO. 5—DISTRICT NO. 98.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Waco Ditch . . . . .	3	120	8	340	100	125	45	60	. . . . .	. . . . .
The Evergreen Ditch . . . . .	.5	45	1.5	80	. . . . .	60	. . . . .	10	. . . . .	. . . . .
The Jacobs Ditch . . . . .	1	90	2	100	20	40	20	20	. . . . .	. . . . .
The Priace Ditch . . . . .	1.25	120	2.5	130	10	. . . . .	90	30	. . . . .	. . . . .
The Pioneer Ditch . . . . .	3	120	10	540	10	90	250	100	. . . . .	. . . . .
The Harris Ditch . . . . .	.75	120	1	160	20	. . . . .	80	40	. . . . .	. . . . .
The Boram and White Ditch . . . . .	2	100	5	260	10	120	25	15	. . . . .	. . . . .
The McPherson Ditch . . . . .	1.5	30	3	250	1	70	. . . . .	85	. . . . .	. . . . .
The Thomas Ditch No. 1 . . . . .	1.25	120	1.5	110	20	. . . . .	30	30	. . . . .	. . . . .
The Jote Smith Ditch . . . . .	1	100	2.2	135	40	40	10	20	. . . . .	. . . . .
The North Side Pioneer Ditch . . . . .	.75	120	3	170	100	10	5	35	. . . . .	. . . . .
The Carroll Ditch . . . . .	2.5	100	4.5	250	. . . . .	140	40	50	. . . . .	. . . . .
The Atkinson Ditch . . . . .	1.45	120	4	385	55	30	45	25	. . . . .	. . . . .

The Robinson Ditch . . . . .	3	120	9	475	180	75	5	80	. . .
The Capitol Park Ditch . . . . .	2.5	80	4	250	7	55	50	50	. . .
The Brush Creek Ditch . . . . .	4	100	4	300	20	. . .	30	150	. . .
The Basin Ditch . . . . .	4	120	8	500	85	10	40	150	. . .
The Robertson Ditch . . . . .	3.5	120	5	375	40	50	25	100	. . .
The Rockford Ditch . . . . .	4	120	4	400	25	. . .	20	40	. . .
The Burke Ditch . . . . .	.5	90	2	110	5	90	. . .	5	. . .
The Bennett Ditch . . . . .	.4	120	1.5	110	40	20	. . .	15	. . .
The Smith and Rex Ditch . . . . .	1	80	2	135	15	10	10	40	. . .
The Walther Ditch . . . . .	2	90	4	310	10	40	. . .	20	. . .
The Sloss Ditch . . . . .	1.5	90	4	240	10	40	50	50	. . .
The Harris and Reed Ditch . . . . .	3.5	120	5	450	60	20	120	110	. . .
The Bowles and Holland Ditch . . . . .	2.5	120	3	140	10	20	30	70	. . .
The Thomas Ditch No. 2 . . . . .	.5	120	1.5	100	15	50	. . .	25	. . .
The Needham Ditch . . . . .	3	100	2.5	700	20	. . .	30	35	. . .
The Sopris High Line Ditch . . . . .	2	120	3	225	22	. . .	60	15	. . .
The Highland Ditch . . . . .	2	100	3	250	40	50	. . .	30	. . .
The C. and M. Ditch . . . . .	3	100	3.5	300	30	. . .	65	80	. . .
The Willow Creek Ditch . . . . .	3.5	100	5	300	15	75	. . .	150	. . .
The Mount Sopris Ditch . . . . .	4.5	100	4	325	50	. . .	60	90	. . .
The Glenwood Ditch . . . . .	6	120	2	500	15	5	. . .	70	. . .
The Monarch Ditch . . . . .	3.5	120	7	500	11	26	200	200	. . .

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Kaiser & Sievers Ditch . . . . .	4	120	6	380	20	50	50	100	. . . . .	. . . . .
The Grace & Shehi Ditch . . . . .	2.5	120	2.5	435	5	. . . . .	25	100	. . . . .	. . . . .
The High Line Ditch . . . . .	3.5	150	3	260	40	10	20	40	. . . . .	. . . . .
The Home Supply Ditch . . . . .	6	150	15	1,000	210	10	305	85	. . . . .	. . . . .
The Hatch Ditch. . . . .	.25	120	2	100	60	. . . . .	. . . . .	20	. . . . .	. . . . .
The Four-Mile Ditch . . . . .	1.5	130	1.5	160	20	15	10	30	. . . . .	. . . . .
The Weaver & Lionhardy Ditch . . . . .	2	120	2	240	20	. . . . .	10	40	. . . . .	. . . . .
The Tierney Ditch . . . . .	1	80	1.5	100	. . . . .	. . . . .	. . . . .	75	. . . . .	. . . . .
Totals in district . . . . .	100.90	. . . . .	. . . . .	12,579	1,486	1,446	1,825	3,085	. . . . .	7,842

# STATEMENT CONCERNING DITCHES

51  
 IN WATER DISTRICT No. 38, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
 FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office.	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The East High Line Ditch . . . .	Coulter creek . . .	Jan. 17, 1889	June 20, 1888	2.60	A. P. Ralston <i>et al</i>
The West Side Ditch . . . . .	E. Fork Coulter crk	Jan. 17, 1889	June 1, 1882	2.60	A. L. Coulter <i>et al</i>
The Lower Thompson Ditch . . .	M. Thompson crk .	April 16, 1889	Nov. 12, 1888	52.08	} The Thompson Irrigation Land & Water Supply Company
The R. L. Hardwick Ditch . . . .	Hardwick gulch . .	April 20, 1889	May 15, 1884	5.05	
The Gibson Spring Ditch . . . . .	A spring . . . . .	May 1, 1889	Nov. 5, 1884	Whole flow	R. L. Hardwick
The C. & L. High Line Ditch	Cattle creek . . . .	May 1, 1889	June 24, 1888	1.82	Mrs E. P. Gibson
The Henschkel & Chapman Ditch	Cattle creek . . . .	May 1, 1889	July 10, 1885	.90	William Chapman and Wilbert E. Lewis
The Henschkel & Sundell High Line Ditch . . . . .	Cattle creek . . . .	May 1, 1889	June 25, 1888	7.30	Fr. L. Henschkel and William Chapman
	Cattle creek . . . .	May 18, 1889	May 1, 1885	1.04	Frank L. Henschkel <i>et al</i>
The Sommers Ditch . . . . .	Four-Mile creek . .	Sept. 2, 1889	May 20, 1886	3	J. P. Sommers
The Lignite Ditch . . . . .	A spring branch . .	Sept. 2, 1889	Aug. 15, 1889	2.72	W. C. Smith <i>et al</i>
The J. S. Miller Ditch No. 1 . . .	A Spring . . . . .	Sept. 2, 1889	Aug. 15, 1889	1.36	J. S. Miller
The J. S. Miller Ditch No. 2 . . . .	Rock creek . . . .	Sept. 11, 1889	Oct. 15, 1888	3	J. S. Miller
The Gray Crystal Ditch . . . . .	Sopris creek . . . .	Sept 16, 1889	May 5, 1885	4.50	Samuel D. Gray
The High Line Ditch . . . . .					Elmer E. Chatfield <i>et al</i>

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Main Ditch . . . . .	Sopris creek . . . . .	Sept. 16, 1889	June, 1881	2	Elmer E. Chatfield
The Buck Farm Ditch . . . . .	Four-Mile creek . . . . .	Oct. 1, 1889	Oct. 15, 1884	3	Archie McGaughan
The Ralston Ditch No. 1 . . . . .	{ W. Fork of Coulter creek . . . . . }	Oct. 1, 1889	Oct. 1, 1884	1	Amos P. Ralston
The Waters Ditch . . . . .	Chippie run . . . . .	Oct. 1, 1889	Mar. 15, 1886	1.50	Thomas Waters
The Keeton-Emison Ditch . . . . .	Mesa creek, . . . . .	Oct. 7, 1889	Sept. 15, 1884	1.90	John W. Keeton and John T. Emison
The Ruedi Ditch . . . . .	Ruedi creek . . . . .	Jan. 10, 1890	Oct. 20, 1889	2.50	John Ruedi
The M. J. Ditch . . . . .	Rock creek . . . . .	Feb. 21, 1890	Not given	50	M. J. Francis
The Ballard Ditch . . . . .	Swift creek . . . . .	Feb. 24, 1890	May 1, 1887	51	M. W. Lewis and Henry H. Ballard
The Prince Ditch . . . . .	Antlers creek . . . . .	Mar. 21, 1890	April 1, 1881	4	Richard Swan
The Thomas Ditch No. 1 . . . . .	Thomas creek . . . . .	April 5, 1890	April 25, 1882	3	John L. Thomas
The Buffalo Ditch . . . . .	{ W. Fork of W. Sopris creek. . . }	April 14, 1890	June 5, 1885	1	John W. Sloss
The Sloss Ditch . . . . .	West Sopris creek . . . . .	April 17, 1890	June 30, 1883	10	S. P. Sloss <i>et al.</i>
The Hunt Spring Ditch . . . . .	A spring . . . . .	April 17, 1890	Aug. 1, 1885	1	Martin Hotz
The Highland Ditch No. 2 . . . . .	West Sopris creek . . . . .	April 22, 1890	June 8, 1887	8	W. S. Swearingen
The Swearingen Ditch . . . . .	Dry Sopris creek . . . . .	April 22, 1890	Mar. 5, 1886	1.50	
The Chapman enl. of the C.M. Ditch . . . . .	Cattle creek . . . . .	May 21, 1890	May 14, 1890	.50	William Chapman
* The Highland Ditch No. 2 . . . . .	West Sopris creek . . . . .	July 9, 1890	June 8, 1887	8	W. S. Swearingen <i>et al.</i>

The F. W. Edgerton Ditch . . . . .	Spring Gulch creek	July 24, 1890	Mar. 1, 1886	4	F. W. Edgerton
The Teller Waste Water Ditch . . . . .		July 30, 1890	May 1, 1890	1	George Teller
The Williams Ditch . . . . .	Capital creek, . . .	Aug. 13, 1890	{ Jan. 1, 1886	7.30	John R. Williams
				4.40	
	Snow Mass creek .	Aug. 13, 1890		1.40	
				4.80	
The McDonnell Irrigating Ditch . . . . .	{ North and South } { McDonnell cr'ks }	Sept. 2, 1890	{ Sept. 28, 1887	1.50	James McDonnell
				2.47	
				2.47	
				2.47	
The Hyde Ditch . . . . .	Roaring Fork . . .	Sept. 12, 1890	Nov. 1, 1885	35.70	A. J. Hyde
The Edgerton Ditch . . . . .	Edgerton creek. . .	Sept. 25, 1890	May 10, 1883	1.50	D. G. Edgerton
The Middle Grace Ditch . . . . .	Roaring Fork . . .	Sept. 26, 1890	May 26, 1887	12	Gustavus G. Grace
The Lower Grace Ditch . . . . .	Roaring Fork . . .	Sept. 26, 1890	June 1, 1885	3.50	Gustavus G. Grace
The Nestell Ditch . . . . .	Maroon creek . . .	Nov. 10, 1890	July 10, 1889	2	Samuel C. Nestell
The Smith Ditch No. 1 . . . . .	Roaring Fork . . .	Nov. 10, 1890	June 1, 1885	2.35	John C. Smith
The Smith Ditch No. 2 . . . . .	Roaring Fork . . .	Nov. 10, 1890	June 1, 1888	2.35	John C. Smith
The Grace & Shehl Ditch . . . . .	Roaring Fork . . .	Nov. 15, 1890	April 23, 1886	3	Ben. D. Grace <i>et al.</i>
The Home Supply Ditch and ext'ns	Roaring Fork . . .	Nov. 24, 1890	May 27, 1887	30	W. R. Hooks and about twelve others
The Green Ditch . . . . .	Willow creek. . . .	Nov. 28, 1890	June 15, 1883	62.50	William H. Green

\* This instrument was sent to J. S. Greene, ex-State Engineer, and laid in his private office from April 24, 1890, until the above date.



## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 33, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Gibson Reservoir. . . .	Laudis creek . . . .	Gibson ditch . . .	May 1, 1889	Nov. 5, 1884	Not given	. . . . Mrs. Eli P. Gibson
The Nipple Storage Reservoir .	Red Cañon creek. . . .	On the stream . .	June 4, 1889	April 15, 1888	825,000	. . . . . Edward Nipple

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 38, GIVING THE DATE AND ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, SO FAR AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE NINTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE, AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	Order of priority in district
The Waco Ditch . . . . .	Woody creek. . . . .	June 18, 1880	2.50	2.50	. . . . .	1
The Evergreen Ditch . . . . .	Owl creek . . . . .	July 2, 1880	1	1	2.50	2
The Little Brush Ditch . . . . .	Little Brush creek . . . . .	July 2, 1880	.60	. . . . .	3.50	3
The Aspen Ditch . . . . .	A spring in Spar gulch. . . . .	July 12, 1880	2	2	4.10	4
The Jacobs Ditch . . . . .	Sopris creek . . . . .	Sept 20, 1880	2	. . . . .	6.10	5
The Prince Ditch . . . . .	Amber creek . . . . .	April 1, 1881	1	1	8.10	6
The Pioneer Ditch . . . . .	Thompson creek. . . . .	May 1, 1881	5	5	9.10	7
The Harris Ditch . . . . .	Harris creek . . . . .	May 5, 1881	2	2	14.10	8
The Boram and White Ditch . . . . .	Capitol creek. . . . .	May 5, 1881	2.50	2.50	16.10	9
The McPherson Ditch. . . . .	Owl creek . . . . .	May 15, 1881	2.80	. . . . .	18.60	10
The Little Woody Ditch. . . . .	Woody creek. . . . .	May 17, 1881	1	. . . . .	21.40	11
The Wenger Ditch . . . . .	Springs. . . . .	May 22, 1881	1	. . . . .	27.40	12

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	Order of priority in district
The Stapleton Ditch . . . . .	Owl creek . . . . .	June 12, 1881	2	2	23.40	13
The West Channel Ditch . . . . .	Sopris creek . . . . .	June 15, 1881	1.20	. . . .	25.40	14
The Hatch Ditch . . . . .	Sopris creek . . . . .	July 10, 1881	1.50	1.50	26.60	15
The Chatfield Reservoir Ditch . . . . .	Sopris creek . . . . .	July 15, 1881	.10	. . . .	28.10	16
The Bivert Ditch . . . . .	Owl creek . . . . .	July 16, 1881	.50	.50	28.20	17
The Luchsinger Ditch . . . . .	Luchsinger creek . . . . .	Aug. 15, 1881	1	1	28.70	18
The Four Mile Ditch . . . . .	Four Mile creek . . . . .	Nov. 6, 1881	3.20	. . . .	29.70	19
The Harris Ditch, first enlargement . . . . .	Harris creek . . . . .	Mar. 25, 1882	1.20	3.29	32.90	20
The Luchsinger Ditch, first enlargement . . . . .	Luchsinger creek . . . . .	Mar. 25, 1882	1	2	34.10	21
The Kirkpatrick Ditch . . . . .	Sopris creek . . . . .	April 14, 1882	7.50	7.50	35.10	22
The Lower Ditch . . . . .	Roaring Fork . . . . .	April 15, 1882	1.50	. . . .	42.60	23
The Thomas Ditch No. 1 . . . . .	Thomas creek . . . . .	April 25, 1882	1	1	44.10	24
The Collins Creek Ditch . . . . .	Collins creek . . . . .	May 1, 1882	2	2	45.10	25
The Hook Ditch . . . . .	Sopris creek . . . . .	May 7, 1882	1.50	1.50	47.10	26
The Prior Ditch . . . . .	Coulter creek . . . . .	May 10, 1882	.70	.70	48.60	27

The Burke and Giddings Ditch . . . . .	Brush creek . . . . .	May 12, 1882	1	1	49.30	28
The Jote Smith Ditch . . . . .	Brush creek . . . . .	May 14, 1882	2	2	50.30	29
The North Side Pioneer Ditch . . . . .	Roaring Fork . . . . .	May 15, 1882	1	1	52.30	30
The Carroll Ditch . . . . .	Brush creek . . . . .	May 16, 1882	2.50	2.50	53.30	31
The Pioneer Ditch, first enlargement . . . . .	Thompson creek . . . . .	May 20, 1882	4.70	9.70	55.80	32
The Atkinson Ditch . . . . .	Four Mile creek . . . . .	May 24, 1882	4	4	60.50	33
The Dean Ditch . . . . .	West Sopris creek . . . . .	June 1, 1882	1	. . .	64.60	34
The Coulter West Side Ditch . . . . .	Coulter creek . . . . .	June 1, 1882	1	1	65.50	35
The Bivert Ditch, first enlargement . . . . .	Owl creek . . . . .	June 1, 1882	1	1.50	66.50	36
The Lemond Ditch . . . . .	Brush creek . . . . .	June 7, 1882	.80	.80	67.50	37
The Robinson Ditch . . . . .	Roaring Fork . . . . .	June 15, 1882	5	5	68.30	38
The Lewish Ditch . . . . .	Cattle creek . . . . .	June 15, 1882	.60	. .	73.30	39
The Lime Creek Ditch . . . . .	Lime creek . . . . .	June 20, 1882	1	. . . .	73.90	40
The Capitol Park Ditch . . . . .	Capitol creek . . . . .	July 11, 1882	2.50	2.50	74.90	41
The Thompson Ditch . . . . .	Thompson creek . . . . .	July 15, 1882	1.30	. . .	77.40	42
The Cummings Springs Ditch . . . . .	Springs in 32 and 33, 7, 87	Aug. 15, 1882	.80	.80	78.70	43
The Wheeler Ditch . . . . .	Roaring Fork . . . . .	Sept. 1, 1882	10	. . . .	79.50	44
The Van Cleve Ditch No. 1 . . . . .	Spring in 33, 6, 88	Sept. 5, 1882	1.40	. . . .	89.50	45
The Van Cleve Ditch No. 2 . . . . .	Spring in 33, 6, 88	Sept. 15, 1882	.90	.90	90.90	46
The Cosy Point Ditch . . . . .	Bush creek . . . . .	Oct. 1, 1882	1.50	. . . .	91.80	47
The Brush Creek Ditch . . . . .	Brush creek . . . . .	Oct. 3, 1882	3	3	93.30	48
The Basin Ditch . . . . .	Roaring Fork . . . . .	Oct. 20, 1882	5	5	96.30	49

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each reservoir	Cubic feet previously appropriated in district	Order of priority in district
The Aspen Ditch, first enlargement . . . . .	A spring in Spar gulch . . . . .	Nov. 5, 1882 . . . . .	3 . . . . .	5 . . . . .	101.30 . . . . .	50
The Rockford Ditch . . . . .	Rock creek . . . . .	Jan. 11, 1883 . . . . .	10 . . . . .	. . . . .	104.30 . . . . .	51
The Robertson Ditch . . . . .	Roaring Fork . . . . .	Feb. 11, 1883 . . . . .	4 . . . . .	4 . . . . .	114.30 . . . . .	52
The Staton Ditch . . . . .	Cattle creek . . . . .	Feb. 15, 1883 . . . . .	1 . . . . .	1 . . . . .	118.30 . . . . .	53
The Barger Ditch . . . . .	Cattle creek . . . . .	Mar. 1, 1883 . . . . .	.50 . . . . .	.50 . . . . .	119.30 . . . . .	54
The Walter Ditch . . . . .	Snow Mass creek . . . . .	April 2, 1883 . . . . .	2.40 . . . . .	. . . . .	119.80 . . . . .	55
The Strang Ditch No. 2 . . . . .	Cattle creek . . . . .	April 5, 1883 . . . . .	.30 . . . . .	. . . . .	122.20 . . . . .	56
The Boram & White Ditch, first enlargement . . . . .	Capitol creek . . . . .	April 10, 1883 . . . . .	2.60 . . . . .	5.10 . . . . .	122.50 . . . . .	57
The Craner Ditch . . . . .	Sopris creek . . . . .	April 15, 1883 . . . . .	1 . . . . .	1 . . . . .	125.10 . . . . .	58
The Burke Ditch . . . . .	Brush creek . . . . .	April 15, 1883 . . . . .	1.70 . . . . .	1.70 . . . . .	126.10 . . . . .	59
The Frying Pan Ditch . . . . .	Frying Pan creek . . . . .	April 20, 1883 . . . . .	.30 . . . . .	. . . . .	127.80 . . . . .	60
The Kirkpatrick Ditch, first enlargement . . . . .	Sopris creek . . . . .	April 25, 1883 . . . . .	.50 . . . . .	8 . . . . .	128.10 . . . . .	61
The Capitol Park Ditch, first enlargement . . . . .	Capitol creek . . . . .	April 30, 1883 . . . . .	2.50 . . . . .	5 . . . . .	128.60 . . . . .	62
The Bennett Ditch . . . . .	Antler or Prince creek . . . . .	May 1, 1883 . . . . .	2.20 . . . . .	. . . . .	131.10 . . . . .	63
The Smith & Rex Ditch . . . . .	Brush creek . . . . .	May 2, 1883 . . . . .	.50 . . . . .	.50 . . . . .	133.30 . . . . .	64

The Waltheu Ditch . . . . .	Woody creek . . . . .	May 10, 1883	3	3	133.80	65
The Wenger Ditch No. 2 . . . . .	Owl creek . . . . .	June 1, 1883	.50	.50	136.80	66
The Prior Ditch, first enlargement . . . . .	Coulter creek . . . . .	June 14, 1883	.70	1.40	137.30	67
The Kirkpatrick Ditch, second enlargement . . . . .	Sopris creek . . . . .	June 15, 1883	.50	8.50	138	68
The Stapleton Ditch, first enlargement . . . . .	Owl creek . . . . .	June 16, 1883	.80	2.80	138.50	69
The Manning Ditch . . . . .	Sopris creek . . . . .	June 28, 1883	1.40	. . . .	139.30	70
The Sloss Ditch . . . . .	Sopris creek . . . . .	June 30, 1883	2.50	2.50	140.70	71
The Strang Ditch No. 1 . . . . .	Mesa creek . . . . .	July 2, 1883	1.20	1.20	143.20	72
The North Side Pioneer Ditch; first enlargement . . . . .	Roaring Fork . . . . .	July 20, 1883	2.40	3.40	144.40	73
The Edgerton Ditch . . . . .	Edgerton creek . . . . .	July 23, 1883	.50	.50	146.80	74
The Tillison Ditch . . . . .	Sopris creek . . . . .	Aug. 1, 1883	.20	. . . .	147.30	75
The Coulter West Side Ditch, first enlargement . . . . .	Coulter creek . . . . .	Aug. 20, 1883	1	2	147.50	76
The Gainer, Sr., Ditch . . . . .	Brush creek . . . . .	Oct. 5, 1883	.90	. . . .	148.50	77
The Harris & Reed Ditch . . . . .	Roaring Fork . . . . .	Nov. 2, 1883	9	. . . .	149.40	78
The Staton Ditch, first enlargement . . . . .	Cattle creek . . . . .	Mar. 1, 1884	1	2	158.40	79
The Thomas Ditch No. 1, first enlargement . . . . .	Thomas creek . . . . .	April 1, 1884	1.20	2.20	159.40	80
The Bowles & Holland Ditch . . . . .	Rock creek . . . . .	April 9, 1884	2.80	. . . .	160.60	81
The Thomas Ditch, No. 2 . . . . .	Thomas creek . . . . .	April 10, 1884	2	. . . .	163.40	82
The Middle Ditch . . . . .	Cummings Springs chan'l . . . . .	April 17, 1884	5	. . . .	165.40	83
The Prewitt Ditch . . . . .	Sopris creek . . . . .	April 25, 1884	1.50	. . . .	170.40	84
The H., C. & L. Ditch . . . . .	Cattle creek . . . . .	May 1, 1884	1.40	1.40	171.90	85
The Strang Ditch No. 1, first enlargement . . . . .	Mesa creek . . . . .	May 1, 1884	1	2.20	173.30	86



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch	Cubic feet per second previously appropriated in district	Order of priority in district
The Prince Ditch, first enlargement . . . . .	Antler creek . . . . .	May 1, 1884	1.60	2.60	174.30	87
The Waltheu Ditch, first enlargement . . . . .	Woody creek . . . . .	May 4, 1884	3.20	6.20	175.90	88
The Gray Ditch . . . . .	Edgerton creek . . . . .	May 10, 1884	2	. . . . .	179.10	89
The Red Mountain Ditch . . . . .	Hunter creek . . . . .	May 15, 1884	2	2	181.10	90
The Edgerton Ditch, first enlargement . . . . .	Edgerton creek . . . . .	May 15, 1884	.50	1	183.10	91
The Quaking Aspe Ditch . . . . .	Owl creek . . . . .	May 20, 1884	.60	. . . . .	183.60	92
The Hook Ditch, first enlargement . . . . .	Sopris creek . . . . .	May 20, 1884	2.50	4	184.20	93
The Wenger Ditch No. 2, first enlargement . . . . .	Owl creek . . . . .	May 25, 1884	.70	1.20	186.70	94
The Carrolls Ditch, first enlargement . . . . .	Brush creek . . . . .	May 31, 1884	1.70	4.20	187.40	95
The Jote Smith Ditch, first enlargement . . . . .	Brush creek . . . . .	June 5, 1884	.70	2.70	189.10	96
The Henschkel and Chapman Ditch . . . . .	Cattle creek . . . . .	June 20, 1884	.30	.30	189.80	97
The Kirkpatrick Ditch, third enlargement . . . . .	Sopris creek . . . . .	July 1, 1884	.20	8.70	190.10	98
The Gainer Jr. Ditch . . . . .	Brush creek . . . . .	July 4, 1884	.30	. . . . .	190.30	99
The Needham Ditch . . . . .	Cattle creek . . . . .	July 11, 1884	3	3	190.60	100
The Keley Ditch . . . . .	Sopris creek . . . . .	Aug. 10, 1884	2.80	. . . . .	193.60	101

The Castle Creek Ditch . . . . .	Castle creek . . . . .	Aug. 15, 1884	2	. . . . .	196.40	102
The Prior Ditch, second enlargement . . . . .	Coulter creek . . . . .	Aug. 25, 1884	.40	1.80	198.40	103
The Miller Ditch . . . . .	Woody creek . . . . .	Sept. 1, 1884	.40	. . . . .	198.80	104
The Waco Ditch, first enlargement . . . . .	Woody creek . . . . .	Nov. 12, 1884	2.50	5	199.20	105
The Southard and Cavanaugh Ditch . . . . .	Rock creek . . . . .	Mar. 23, 1885	1.50	1.50	201.70	106
The Sopris High Line Ditch . . . . .	Sopris creek . . . . .	Mar. 25, 1885	4.50	. . . . .	203.20	107
The Basin Ditch, first enlargement . . . . .	Roaring Fork . . . . .	Mar. 27, 1885	5	10	207.70	108
The Atkinson Ditch, first enlargement . . . . .	Four-Mile creek . . . . .	Mar. 30, 1885	3	7	212.70	109
The Mason Ditch . . . . .	Cattle creek . . . . .	April 1, 1885	.1	1	215.70	110
The Cramer Ditch, first enlargement . . . . .	Sopris creek . . . . .	April 1, 1885	1.50	2.50	216.70	111
The Robertson Ditch, first enlargement . . . . .	Roaring Fork . . . . .	April 1, 1885	3.50	7.50	218.20	112
The Barger Ditch, first enlargement . . . . .	Cattle creek . . . . .	April 1, 1885	1	1.50	221.70	113
The Kelso Ditch . . . . .	Roaring Fork . . . . .	April 15, 1885	1	. . . . .	222.90	114
The Burke Ditch, first enlargement . . . . .	Brush creek . . . . .	April 18, 1885	.50	2.20	223.70	115
The Kelly Ditch . . . . .	Spring creek . . . . .	April 20, 1885	2	. . . . .	224.20	116
The Weaver & Leonhardt Ditch . . . . .	Rock creek . . . . .	April 20, 1885	4.80	. . . . .	226.20	117
The Rowden Ditch . . . . .	Three-Mile creek . . . . .	May 1, 1885	.50	. . . . .	231	118
The Williams Ditch . . . . .	Little Woody creek . . . . .	May 8, 1885	.10	. . . . .	231.50	119
The Tierney Ditch . . . . .	Little Woody creek . . . . .	May 8, 1885	.20	. . . . .	231.60	120
The Van Cleve Ditch No. 2, first enlargement . . . . .	Springs in 33-6-88 . . . . .	May 15, 1885	2	2.90	231.80	121
The Brush Creek Ditch, first enlargement . . . . .	Brush creek . . . . .	May 20, 1885	3	6	233.80	122
The Hook Ditch, second enlargement . . . . .	Sopris creek . . . . .	June 1, 1885	.30	4.30	236.80	123

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to ditch or canal	Cubic feet per second appropriated in district	Order of priority in district
The Highland Ditch . . . . .	Snow Mass creek . . . . .	June 15, 1885	5	. . . . .	237.10	124
The Martin Ditch. . . . .	W. Fork of W. Sopris cr'k	June 16, 1885	.50	.50	242.10	125
The Somers Ditch . . . . .	Cattle creek . . . . .	June 20, 1885	.20	.20	242.60	126
The Smith & Rex Ditch, first enlargement. . . . .	Brush creek . . . . .	June 20, 1885	.70	1.20	242.80	127
The C. and M. Ditch . . . . .	Cattle creek . . . . .	June 26, 1885	6	. . . . .	243.50	128
The Willow Creek Ditch . . . . .	Willow creek. . . . .	July 1, 1885	3	3	249.50	129
The Mount Sopris Ditch . . . . .	{ W. Sopris cr'k and trib- utaries & Prince cr'k }	July 15, 1885	5	5	252.50	130
The H. C. and L. Ditch, first enlargement . . . . .	Cattle creek . . . . .	July 20, 1885	.10	1.50	257.50	131
The Glenwood Ditch . . . . .	Cattle creek . . . . .	July 25, 1885	18	. . . . .	257.60	132
The Monarch Ditch. . . . .	Cattle creek . . . . .	July 31, 1885	5	5	275.60	133
The Monarch Ditch. . . . .	Cattle creek . . . . .	Sept. 10, 1885	5	10	280.60	134
The McNulty Ditch . . . . .	A Spring . . . . .	Sept. 15, 1885	.40	. . . . .	285.60	135
The Kaiser and Sievers Ditch . . . . .	Rock creek. . . . .	Nov. 2, 1885	4	4	286	136
The Swearingen Ditch . . . . .	Dry Fork of Sopris creek	Mar. 5, 1886	.70	. . . . .	290	136½
The Basin Ditch, Ryan enlargement. . . . .	Roaring Fork . . . . .	Mar. 25, 1886	1.80	11.80	290.70	137

The Coal Creek Ditch . . . . .	Coal or Edgerton creek . . . . .	April 15, 1886	1	292.50	138
The Fonder Ditch . . . . .	Cattle creek . . . . .	April 15, 1886	1	293.50	139
The Robinson Ditch, first enlargement . . . . .	Roaring fork . . . . .	April 15, 1886	2.50	294.50	140
The Craver's Ditch . . . . .	Roaring fork . . . . .	April 15, 1886	5	297	141
The Grace & Shehi Ditch . . . . .	Roaring fork . . . . .	April 23, 1886	8.50	302	142
The Little Elk Ditch . . . . .	Elk creek . . . . .	April 25, 1886	.80	310.50	143
The Orchard Ditch . . . . .	Harris or Johnson creek . . . . .	May 1, 1886	.10	311.30	144
The Waco Ditch, second enlargement . . . . .	Woody creek . . . . .	May 1, 1886	1.80	311.40	145
The High Line Ditch . . . . .	Thompson creek . . . . .	May 3, 1886	5.20	313.20	146
The Atkinson Ditch, second enlargement . . . . .	Four Mile creek . . . . .	May 5, 1886	.70	318.40	147
The W. W. Kelly Ditch . . . . .	Waste water Basin ditch . . . . .	May 15, 1886	1	319.10	148
The Foley Ditch . . . . .	Harris creek . . . . .	May 16, 1886	.50	320.10	149
The Martin Ditch, first enlargement . . . . .	W. fork of W. Sopris crk . . . . .	May 25, 1886	.20	320.60	150
The Mesa Ditch . . . . .	Thomas and Prince creek . . . . .	May 30, 1886	2.60	320.80	151
The Sweedes Ditch . . . . .	Cattle creek . . . . .	June 1, 1886	.50	323.40	152
The Chatfield Ditch . . . . .	Sopris creek . . . . .	June 1, 1886	.10	323.90	153
The Jacobs Ditch No. 2 . . . . .	Sopris creek . . . . .	June 1, 1886	.60	324	154
The Carroll Ditch, second enlargement . . . . .	Brush creek . . . . .	June 2, 1886	.80	324.60	155
The Hatch Ditch, first enlargement . . . . .	Sopris creek . . . . .	June 5, 1886	.50	325.40	156
The Smith & Rex Ditch, second enlargement . . . . .	Brush creek . . . . .	June 5, 1886	1.50	325.90	157
The Evergreen Ditch, first enlargement . . . . .	Owl creek . . . . .	June 5, 1886	.60	327.40	158
The Clavel Ditch . . . . .	Little Woody creek . . . . .	June 15, 1886	5	328	159

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority.	Summation of decrees to each ditch	Cubic feet per second previously appropriated in district	Order of priority in district
The Willow and Owl Ditch . . . . .	Willow creek. . . . .	July 20, 1886	13	. . . . .	333	160
The Bane Ditch. . . . .	Thomas creek. . . . .	July 23, 1886	1.40	. . . . .	346	161
The Sloss Ditch, first enlargement . . . . .	Sopris creek. . . . .	Aug. 15, 1886	2.30	4.80	347.40	162
The Needham Ditch, first enlargement. . . . .	Cattle creek . . . . .	Sept. 3, 1886	11	14	349.70	163
The McNulty Ditch No. 2 . . . . .	Shippy Run creek . . . . .	Sept. 20, 1886	.50	.50	350.70	164
The Baue & Thomas Ditch . . . . .	Rock creek. . . . .	Oct. 10, 1886	4	. . . . .	361.20	165
The Kaiser & Sievers Ditch, first enlargement . . . . .	Rock creek. . . . .	Oct. 12, 1886	3.60	7.60	365.20	166
The Robinson Ditch, second enlargement . . . . .	Roaring fork. . . . .	Nov. 15, 1886	2	9.50	368.80	167
The Cramer Ditch, second enlargement . . . . .	Sopris creek. . . . .	Mar. 30, 1887	.20	2.70	370.80	168
The Carbondale Ditch . . . . .	Rock creek. . . . .	April 1, 1887	5	. . . . .	371	169
The Southard & Cavanaugh Ditch, first enlargement . . . . .	Rock creek. . . . .	April 4, 1887	1.20	2.70	376	170
The Mason Ditch, first enlargement . . . . .	Cattle creek . . . . .	April 10, 1887	1.50	2.50	377.20	171
The Cummings Spring Ditch, first enlargement . . . . .	Springs in 32 and 33-7-8 . . . . .	April 15, 1887	.80	1.60	378.70	172
The Robinson & Harris Ditch . . . . .	Johnson or Harris creek . . . . .	April 20, 1887	.40	. . . . .	379.50	173
The Willow Creek Ditch, first enlargement. . . . .	Willow creek. . . . .	May 1, 1887	3	6	379.90	174



The Somers Ditch, first enlargement . . . . .	Cattle creek . . . . .	May 2, 1887	.50	.70	382.90	175
The Snow Mass Ditch . . . . .	Snow Mass creek . . . . .	May 15, 1887	4.80	. . . . .	383.40	176
The Burke & Giddings Ditch, first enlargement . . . . .	Brush creek . . . . .	May 17, 1887	.80	1.80	388.20	177
The Good Friend Ditch . . . . .	Sopris creek . . . . .	May 25, 1887	2	. . . . .	389	178
The Home Supply Ditch . . . . .	Roaring Fork . . . . .	May 27, 1887	20	. . . . .	391	179
The Highland Ditch No. 2 . . . . .	West Sopris creek . . . . .	June 8, 1887	2	. . . . .	411	180
The Kelly & Askins Ditch . . . . .	Brush creek . . . . .	June 27, 1887	1.90	. . . . .	413	181
The Collins Creek Ditch . . . . .	Collins creek . . . . .	Sep. 1, 1887	1.50	3.50	414.90	182
The Mount Sopris Ditch, first enlargement . . . . . {	West Sopris creek and {	Oct. 1, 1887	1.50	6.50	416.40	183
The Shippee Ditch . . . . .	tribut. and Prince cr'k } Sopris creek . . . . .	Feb. 1, 1888	.30	. . . . .	417.90	184
The Dearing Ditch . . . . .	Four-Mile ditch . . . . .	Mar. 12, 1888	.90	. . . . .	418.20	185
The Eagle Ditch . . . . .	Sopris creek . . . . .	Mar. 17, 1888	.50	. . . . .	419.10	186
The Lemon Ditch, first enlargement . . . . .	Brush creek . . . . .	April 2, 1888	.70	1.50	419.60	187
The Blue Creek Ditch . . . . .	Blue creek . . . . .	April 14, 1888	.90	. . . . .	420.30	188
The Thompson & Edgerton Ditch . . . . . {	Thompson, Edgerton & {	May 16, 1888	30	. . . . .	421.20	189
The McNully Ditch No. 2, first enlargement . . . . .	Yank cr'ks & branch. } Shippy Run creek . . . . .	June 1, 1888	1.50	2	451	190
The Highland Ditch, first enlargement . . . . .	Snow Mass creek . . . . .	June 5, 1888	2	4	452.50	191
The Paradise Ditch . . . . .	Woody creek . . . . .	June 14, 1888	3	. . . . .	454.50	192
The Hueschkel & Chapman Ditch, first enlargement . . . . .	Cattle creek . . . . .	June 15, 1888	.50	.80	457.50	193
The Bryant Ditch . . . . .	Sopris creek . . . . .	June 16, 1888	.70	. . . . .	458	194
The West Highline Ditch . . . . .	Coulter creek . . . . .	June 18, 1888	3.60	. . . . .	458.70	195
The Dutchman Ditch . . . . .	Cattle creek . . . . .	June 20, 1888	6.80	. . . . .	462.30	196



## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	Order of priority in district
The East Highline Ditch . . . . .	Coulter creek . . . . .	June 20, 1888	1.90	. . . . .	469.10	197
The Ralston Ditch . . . . .	Coulter creek . . . . .	June 21, 1888	2	. . . . .	471	198
The C. and L. Highline Ditch . . . . .	Cattle creek . . . . .	June 23, 1888	1.40	. . . . .	473	199
The Lewis and Lavine Ditch . . . . .	Coulter creek . . . . .	June 28, 1888	2	. . . . .	474.40	200
The Gregory Ditch . . . . .	Cattle creek . . . . .	July 17, 1888	.90	. . . . .	476.40	201
The Perham Ditch . . . . .	Phillip creek . . . . .	July 30, 1888	1.60	. . . . .	477.30	202
The D'Aignon Ditch . . . . .	Woody creek . . . . .	Sep. 24, 1888	2.80	. . . . .	478.90	203
The Red Mountain Ditch, first enlargement . . . . .	Middle and North Thompson and Rock creeks, branches and springs	Nov. 12, 1888	50	. . . . .	481.70	204
The Lower Thompson Ditch . . . . .	Hunter creek . . . . .	Nov. 27, 1888	13	15	531.70	205
Total in district . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	544.70	

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 38, GIVING THE DATE, ORDER OF PRIORITY AND AMOUNT OF EACH APPROPRIATION FOR THE RESERVOIRS IN SAID DISTRICT, AS THE SAME HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE NINTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF RESERVOIR	Name of stream from which water is taken	Date of priority	Cubic feet of water decreed to each priority	Cubic feet previously appropriated in district	Order of priority in district
The Bourg Reservoir . . . . .	Dry Woody creek . . . . .	Nov. 23, 1882	27,000	. . . . .	1
The Edgerton Reservoir . . . . .	Gulch, tributary of Edgerton creek . .	April 15, 1887	41,000	27,000	2
The Thomas Reservoir . . . . .	Thomas creek . . . . .	July 5, 1887	418,000	68,000	3
The Bennett Reservoir . . . . .	Antler or Prince creek . . . . .	Oct. 1, 1887	262,000	486,000	4
The Mesa Reservoir . . . . .	Antler, or Prince, and Thomas creeks . .	Oct. 1, 1887	700,000	748,000	5
Total in district . . . . .	. . . . .	. . . . .	. . . . .	1,448,000	

*Water District No. 39*—A. S. Himebaugh, Water Commissioner for 1889. Residence, De Beque, Mesa county; and Frank B. Squires for 1890.

Mr. Himebaugh reports having been called out June 19, 1889, and submits a tabulated statement of water distribution for that season.

No report was submitted for 1890.

# COMMISSIONER'S REPORT, A. D. 1889.

DIVISION No. 5—DISTRICT No. 39.

STATE ENGINEER.

427

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein, approximate	Average amount of water carried during season of 1889 in cubic feet per second of time	Number of acres that can be irrigated therefrom.	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom.	Number of acres of other crops irrigated therefrom.	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Roan Creek Ditch . . . . .	2	180	3.50	480	120	. . . . .	. . . . .	80	. . . . .	. . . . .
The Upper Roan Creek Ditch . . . . .	3	180	2	300	4.50	. . . . .	105	30	. . . . .	. . . . .
The Roan Creek Ditch No. 1 . . . . .	2.25	180	1	600	10	. . . . .	. . . . .	30	Forest trees acres.	. . . . .
The Roan Creek Ditch No. 2 . . . . .	1.50	180	1	250	. . . . .	15	. . . . .	35	. . . . .	. . . . .
The Creek & Newman Ditch . . . . .	3	180	2	650	10	. . . . .	. . . . .	90	. . . . .	. . . . .
The Himebaugh Ditch . . . . .	1	180	.50	130	5	. . . . .	. . . . .	15	. . . . .	. . . . .
The Clear Creek Ditch . . . . .	4	170	2	800	15	. . . . .	. . . . .	85	. . . . .	. . . . .
The Cottonwood Ditch . . . . .	1	100	.20	. . . . .	. . . . .	. . . . .	. . . . .	12	. . . . .	. . . . .
The King Ditch . . . . .	.75	160	1	150	10	. . . . .	. . . . .	40	. . . . .	. . . . .
The Dry Fork Ditch. . . . .	1.50	130	.70	200	5	. . . . .	. . . . .	30	. . . . .	. . . . .
The Carr & Himebaugh Ditch . . . . .	1.50	120	1	100	2	15	. . . . .	33	. . . . .	. . . . .
The Couwell Ditch . . . . .	1	140	.50	160	10	5	. . . . .	5	. . . . .	. . . . .
The Cañon Ditch . . . . .	2	130	1	300	6	. . . . .	15	29	. . . . .	. . . . .
Totals in district . . . . .	24.50	. . .	16.41	4,120	197.50	40	120	514	. . .	\$71.50

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 39, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1885, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The D. F. Webster Ditch . . . . .	Grand river . . . . .	Dec. 29, 1888	Aug. 21, 1888	12.18	Daniel F. Webster
The McGourlick Ditch . . . . .	Four-Mile creek . . . . .	Feb. 21, 1889	Feb. 14, 1884	2.85	Peter McGourlick
The Excelsior Ditch . . . . .	Grand river . . . . .	Mar. 18, 1889	Dec., 1885	33.26	Charles M. Rutison
The Shields Ditch . . . . .	Grand river . . . . .	Mar. 18, 1889	Jan. 15, 1887	4	Lewis C. Shields
The C. J Ditch . . . . .	Rifle creek . . . . .	Mar. 28, 1889	Sept. 12, 1883	15.46	{ Edwin Baker, Henry J. Blewins, H. W. Hallett, B. Langstaff, Albert Ziesenis, C. J. Hallett, J. H. Vixor, J. F. Hickman
The Minks Ditch . . . . .	Cañon creek . . . . .	April 18, 1889	June 4, 1886	5.90	Geo. W. Mings
The Connolly Ditch, Sherrill enl . . . . .	E. Fork Elk creek . . . . .	May 10, 1889	Spring, 1882	60 ins.	Eliza Sherrill
The Star Ditch . . . . .	East Elk creek . . . . .	May 25, 1889	Feb. 23, 1889	18	{ M. C. Vanderveiter, J. B. Putnam and William Lloyd Peacocke
The Mings, Chenowith & Wolverton Ditch . . . . .	Cañon creek . . . . .	July 10, 1889	June 4, 1886	5.90	Geo. Mings, W. L. Copeland and E. T. Wolverton
The Wolverton Ditch . . . . .	Cañon creek . . . . .	July 31, 1889	Mar. 1, 1884	8	E. T. Wolverton
The Bridges Ditch . . . . .	Brush creek . . . . .	Aug. 12, 1889	May 10, 1887	2	William Bridges
The Hayes Ditch . . . . .	Brush creek . . . . .	Aug. 12, 1889	April 15, 1888	3	William Bridges and James S. Hayes
The Barrett Ditch . . . . .	E. Fork Elk creek . . . . .	Sept. 2, 1889	Aug. 15, 1889	1	Thomas Barrett
The Arkansas Ditch . . . . .	Roan creek . . . . .	Sept. 5, 1889	June 4, 1889	1.75	Truman S. Caldwell
The Box Cañon Ditch . . . . .	E. Fork Rifle creek . . . . .	Sept. 18, 1889	April 15, 1885	3	Walter L. Wilder

The Cannon Ditch . . . . .	Brush creek . . . . .	Sept. 24, 1889	May 10, 1887	1.50	F. P. Cannon, John T. Van Cleave and W. B. Weaver
The Cannon & Van Cleave Ditch . . . . .	Brush creek . . . . .	Sept. 24, 1889	April 10, 1884	4.50	W. Van Cleave, John T. Van Cleave and C. D. Stanley
The Van Cleave Ditch . . . . .	Roan creek . . . . .	Sept. 24, 1889	Apr 1 16, 1889	3	
The Darrow Ditch . . . . .	East Elk creek . . . . .	Sept. 26, 1889	June 6, 1889	65	C. W. Darrow
The Darrow Ditch, supplemental statement . . . . .	East Elk creek . . . . .	Sept. 26, 1889	July 26, 1889	Not given	C. W. Darrow
The Rifle Falls Ditch . . . . .	East Rifle creek . . . . .	Oct. 4, 1889	May 1, 1885	2	Joseph M. Watson
The Crystle Falls Ditch . . . . .	East Rifle creek . . . . .	Oct. 11, 1889	May 1, 1886	5	Agustus E. Browning
The Johnson Ditch . . . . .	North Cañon creek . . . . .	Oct. 11, 1889	May 21, 1889	2.06	Alexander W. Johnson
The Waggoner Ditch . . . . .	E. Fork Elk creek . . . . .	Dec. 26, 1889	Dec. 1, 1889	2.75	William A. Waggoner
The Jennings Ditch . . . . .	E. Fork Elk creek . . . . .	Jan. 8, 1890	Feb. 10, 1889	3.75	James Jennings
The Hadley Ditch . . . . .	Middle Elk creek . . . . .	Jan. 31, 1890	April 1, 1887	6	A. C. Hadley
The Snow Ditch . . . . .	Rhone creek . . . . .	Jan. 31, 1890	Feb., 1887	7.50	George S. Snow
The Hadley & Clinetop Ditch . . . . .	Middle Elk creek . . . . .	Feb. 12, 1890	Jan. 1, 1890	4.80	Harry Clinetop, Sarah Clinetop and A. C. Hadley
The Mountain Ditch . . . . .	Middle Elk creek . . . . .	Feb. 12, 1890	Feb. 5, 1890	4.80	Harrison, Sarah and Lucy Clinetop
The Glover Ditch . . . . .	Rowley gulch . . . . .	Mar. 19, 1890	June 1, 1885	1	L. A. Harrison, Deidrich Shultz, Paul Kren- ling, Herman Krenling and Theodore Krenling
The Crystal Valley Irrigating Ditch . . . . .	Crystal creek . . . . .	April 3, 1890	May 10, 1888	29.70	Mrs. E. E. Sherrill
The Oak Grove Ditch . . . . .	East Elk creek . . . . .	April 14, 1890	Feb. 10, 1890	7.384	Henry Nelson and Elijah R. Parker
The Nelson Ditch . . . . .	M. Fork Rifle creek . . . . .	April 30, 1890	Sept. 15, 1888	2	Edgel M. Herriott
The Burton Ditch . . . . .	Mitchell creek . . . . .	May 19, 1890	June 20, 1885	1	H. C. Piggott
The Piggott Ditch No. 1 . . . . .	Magpie creek . . . . .	June 28, 1890	April 1, 1887	5	H. C. Piggott
The Piggott Ditch No. 2 . . . . .	Thompson creek . . . . .	June 28, 1890	April 1, 1887	Not given	William H. Tanney
The Tanney Ditch . . . . .	Spring creek . . . . .	July 25, 1890	June 28, 1890	.50	



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Cooley Ditch . . . . .	Garfield creek . . .	Sept. 11, 1890	April 13, 1890	1.357	. . . . . Orson W. Cooley
The Cooley Ditch No. 2 . . . . .	Garfield creek . . .	Sept. 11, 1890	July 18, 1890	.3125	. . . . . Orson W. Cooley
The Nott Ditch No. 1 . . . . .	Mitchell creek . . .	Oct. 1, 1890	Sept. 29, 1890	1.23	. . . . . S. W. Nott
The Nott Ditch No. 2 . . . . .	Mitchell creek . . .	Oct. 1, 1890	Sept. 29, 1890	1.95	. . . . . S. W. Nott
The Webster and Langstaff Ditch . . . . .	Grand river . . . . .	Oct. 9, 1890	Aug. 2, 1888	12.18	. . . . . John J. Langstaff and D. F. Webster
The Ellen Connally Ditch No. 2 . . . . .	E. Fork Elk creek	Oct. 23, 1890	Sept. 28, 1890	2.50	. . . . . Ellen Connally
The Independent Ditch . . . . .	{ Hoffman's Fork of Rifle creek }	Oct. 27, 1890	Sept. 25, 1890	1.40	. . . . . A. A. Harris
The Cornell Ditch . . . . .	Parachute creek . . .	Nov. 12, 1890	Feb. 1, 1886	3 50	. . . . . Isaac N. Cornell <i>et al</i>
The Cornell Ditch, enlargement . . . . .	Parachute creek . . .	Nov. 12, 1890	July 31, 1888	5	. . . . . Isaac N. Cornell <i>et al</i>

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 39, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The P. M Reservoir . . . . .	Rifle creek . . . . .	Grand tunnel . . . . .	Dec. 29, 1888	Aug. 15, 1888	20,000,000	{ J. More, Ephraim Perfontaine and Alphonse Perfontaine }
The Dela Matyr Reservoir . . . . .	{ No. 1 . . . . . No. 2 . . . . . No. 3 . . . . . }	{ Dry Fork Roan creek "D and A" ditch . . . . . }	Aug. 15, 1889	July 15, 1887	65,280	{ . . . . . Walter A. Dela Matyr }
			Aug. 15, 1889	May 1, 1889	399,000	
			Aug. 15, 1889	May 15, 1889	1,372,000	
The Nelson Reservoir . . . . .	Not given . . . . .	Not given . . . . .	Apr. 30, 1890	Apr. 26, 1890	Not given	Henry Nelson
The Piggott Reservoir . . . . .	Magpie creek . . . . .	On the stream . . . . .	June 28, 1890	Mar. 1, 1890	600,000	H. C. Piggott
The Independent Reservoir . . . . .	{ Hoffman's Fork of Rifle creek . . . . . }	Independent . . . . .	Oct. 27, 1890	Sept 25, 1890	1,025,000	A. A. Harris

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 39, GIVING THE DATE, ORDER OF PRIORITY, AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, AS THEY HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE NINTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH, CANAL, OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second appropriated in district	Order of priority in district
The Pioneer Ditch . . . . .	Rifle creek . . . . .	May 10, 1882	5	5	. . . .	1
The Grand Tunnel Ditch . . . . .	Rifle creek . . . . .	May 15, 1882	2	2	5	2
The Oasis Ditch . . . . .	Oasis creek . . . . .	Oct. 10, 1882	1.6	1.6	7	3
The Thompkins Ditch . . . . .	Middle Branch of Elk creek . . . . .	Mar. 10, 1883	.8	. . . .	8.6	4
The Rifle Creek Cañon Ditch . . . . .	Rifle creek . . . . .	Mar. 10, 1883	4	4	9.4	5
The Italian Ditch . . . . .	West or Dry Fork of Rifle creek . . . . .	April 1, 1883	2.6	2.6	13.4	6
The Wisdom Ditch . . . . .	Rifle creek . . . . .	April 1, 1883	4	4	16	7
The Reynolds and Cain Ditch . . . . .	Mitchel creek . . . . .	April 19, 1883	5	. . . .	. . . .	8
The Daisy Ditch . . . . .	Parachute creek . . . . .	May 17, 1883	6.4	6.4	25	9
The Squier Ditch . . . . .	Rifle creek . . . . .	May 23, 1883	.5	.5	31.4	10
The Coryell Ditch . . . . .	Elk creek . . . . .	June 1, 1883	2.8	2.8	31.9	11

The King Ditch . . . . .	June . . . . .	1, 1883	1	1	34.7	12
The Newton Ditch . . . . .	July . . . . .	1, 1883	1.5	1.5	35.7	13
The Mitchel and Cooper Ditch . . . . .	July . . . . .	5, 1883	.8	.8	37.2	14
The Ware and Hinds Ditch . . . . .	Oct. . . . .	1, 1883	4	4	38	15
The Excelsior Ditch . . . . .	Nov. . . . .	5, 1883	2	2	42	16
The Stobaugh Ditch . . . . .	Nov. . . . .	20, 1883	4	4	44	17
The C. O. and C. P. Pierson Ditch . . . . .	Feb. . . . .	75, 1884	3	. . . .	48	18
The Eyre Ditch . . . . .	Feb. . . . .	15, 1884	4	4	51	19
The Daisy Ditch, first enlargement . . . . .	Feb. . . . .	25, 1884	3.2	9.6	55	20
The Roan Creek Ditch . . . . .	Feb. . . . .	28, 1884	6	6	58.2	21
The King Ditch, first enlargement . . . . .	March . . . . .	10, 1884	1	2	64.2	22
The Conwell Ditch . . . . .	April . . . . .	13, 1884	2.8	2.8	65.2	23
The Grand Tunnell Ditch, first enlargement . . . . .	April . . . . .	13, 1884	2	4	68	24
The Connally Ditch . . . . .	May . . . . .	1, 1884	1.6	. . . .	70	25
The Oasis Ditch, first enlargement . . . . .	June . . . . .	1, 1884	2	3.6	71.6	26
The Coryell Ditch, first enlargement . . . . .	June . . . . .	8, 1884	1.7	4.5	73.6	27
The Upper Roan Creek Ditch . . . . .	Aug. . . . .	10, 1884	3	3	75.3	28
The Italian Ditch, first enlargement . . . . .	Sept. . . . .	2, 1884	1	3.6	78.3	29
The Saints Ditch . . . . .	Sept. . . . .	2, 1884	1.6	1.6	79.3	30
The Roan Creek Ditch No. 2 . . . . .	Sept. . . . .	10, 1884	7	7	80.9	31
The Roan Creek Ditch No. 3 . . . . .	Oct. . . . .	13, 1884	2.6	2.6	87.9	32
The Roan Creek Ditch No. 2, first enlargement . . . . .	Oct. . . . .	20, 1884	2	9	90.5	33

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second appropriated in district	Order of priority in district
The Creek & Newman Ditch . . . . .	Roan creek . . . . .	Nov. 15, 1884	4	4	92.5	34
The Diamond Ditch . . . . .	Parachute creek . . . . .	Mar. 15, 1885	2.5	2.5	96.5	35
The Cottonwood Ditch . . . . .	Dry Fork of Roan creek . . . . .	Mar. 20, 1885	1	1	99	36
The Italian Ditch, second enlargement . . . . .	Elk creek . . . . .	April 1, 1885	1	4.6	100	37
The Saints Ditch, first enlargement . . . . .	W. Fork of Elk creek . . . . .	April 1, 1885	1.6	3.2	101	38
The Hibschrle, Parris & Mann Ditch . . . . .	E. Fork of Rifle creek . . . . .	April 15, 1885	2	2	102.6	39
The Grand Tunnel Ditch, second enlargement . . . . .	Rifle creek . . . . .	April 15, 1885	4	8	104.6	40
The Gilmore Ditch . . . . .	Oasis creek . . . . .	April 16, 1885	2.7	. . . . .	108.6	41
The Mitchel & Cooper Ditch, first enlargement . . . . .	Oasis creek . . . . .	May 1, 1885	.4	1.2	111.3	42
The Manning & Ritter Ditch . . . . .	Middle Fork Rifle creek . . . . .	May 10, 1885	.4	.4	111.7	43
The Hinebaugh Ditch . . . . .	Clear creek . . . . .	May 15, 1885	2.6	. . . . .	112.1	44
The Kimball Ditch . . . . .	Kimball creek . . . . .	June 1, 1885	1.5	. . . . .	114.7	45
The Cannon Ditch . . . . .	Brush creek . . . . .	June 3, 1885	3.2	3.2	116.2	46
The Allen Ditch . . . . .	Cottonwood creek . . . . .	June 5, 1885	2	. . . . .	119.4	47
The Newton Ditch, first enlargement . . . . .	Clear creek . . . . .	June 20, 1885	1.6	3.1	121.4	48

The G. E. Harris Ditch No. 2 . . . . .	July 1, 1885	.8	.8	123	49
The Upper Roan Creek, first enlargement . . . . .	Nov. 14, 1885	1.2	4.2	123.8	50
The Cornell Ditch. . . . .	Feb. 1, 1886	3.5	3.5	125	51
The Conwell Ditch, first enlargement . . . . .	Feb. 10, 1886	1.6	4.4	128.5	52
The Baker & Bowdish Ditch . . . . .	Feb. 11, 1886	2	. . . . .	130.1	53
The Rifle Creek Cañon Ditch, first enlargement . . . . .	Feb. 15, 1886	4	8	132.1	54
The Roan Creek Ditch No. 3, first enlargement . . . . .	Feb. 15, 1886	4	6.6	136.1	55
The Rifle Creek Ditch No. 1 . . . . .	Mar. 1, 1886	.6	.6	140.1	56
The Ware & Hinds Ditch, first enlargement . . . . .	Mar. 1, 1886	6.5	10.5	140.7	57
The Cañon Creek Ditch. . . . .	Mar. 15, 1886	3	. . . . .	147.2	58
The Eyre Ditch, first enlargement . . . . .	Mar. 15, 1886	1.5	5.5	150.2	59
The Roan Creek Ditch, first enlargement . . . . .	Mar. 15, 1886	3.3	9.3	151.7	60
The Pioneer Ditch, first enlargement. . . . .	April 1, 1886	1.9	6.9	155	61
The Clear Creek Ditch . . . . .	April 9, 1886	7.3	7.3	156.9	62
The Dry Fork Ditch. . . . .	April 12, 1886	1.4	1.4	164.2	63
The Mansfield Ditch . . . . .	April 16, 1886	1	. . . . .	165.6	64
The Frauhier Ditch . . . . .	April 16, 1886	2.9	. . . . .	166.6	65
The Heinze Ditch. . . . .	April 20, 1886	1	. . . . .	169.5	66
The Manning Ditch . . . . .	April 26, 1886	1.6	1.6	170.5	67
The Anderson & Hayes Ditch . . . . .	April 28, 1886	1	1	172.1	68
The Meksal Ditch No. 1. . . . .	May 5, 1886	2	. . . . .	173.1	69
The Creek & Newman Ditch, first enlargement . . . . .	May 11, 1886	5	9	175.1	70



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH	Stream from which water is taken	Date of completion	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second appropriated in district	Order of priority in district
The Mekeal Ditch No. 2 . . . . .	Government creek . . . . .	May 15, 1886	.8	. . . . .	180.1	71
The Dutchman Ditch . . . . .	Dry Fork of Elk creek . . . . .	May 15, 1886	.6	.6	180.9	72
The Vetter Ditch . . . . .	Rifle creek . . . . .	May 16, 1886	.6	.6	181.5	73
The Hibschiele & Benbow Ditch . . . . .	East Fork of Rifle creek . . . . .	May 17, 1886	1.4	1.4	182.1	74
The Cataract Ditch . . . . .	Kimball creek . . . . .	June 5, 1886	2.4	2.4	183.5	75
The Clear Creek Ditch, first enlargement . . . . .	Clear creek . . . . .	June 8, 1886	.8	8.1	185.9	76
The Parris & Mann Ditch . . . . .	East Fork of Rifle creek . . . . .	Aug. 20, 1886	2.2	. . . . .	186.7	77
The Clear Creek Ditch, second enlargement . . . . .	Clear creek . . . . .	Oct. 15, 1886	1.6	9.7	188.9	78
The A. V. & D. Ditch . . . . .	Kimball creek . . . . .	Nov. 10, 1886	1	1	190.5	79
The Rifle Creek Cañon Ditch, second enlargement . . . . .	Rifle creek . . . . .	Nov. 15, 1886	16	24	191.5	80
The Roan Creek Ditch No. 2, second enlargement . . . . .	Roan creek . . . . .	Nov. 15, 1886	3.5	12.5	207.5	81
The Grand Tunnel Ditch, third enlargement . . . . .	Rifle creek . . . . .	Dec. 1, 1886	12	20	211	82
The Low Cost Ditch . . . . .	Parachute creek . . . . .	Jan. 4, 1887	5	5	223	83
The Reservoir Ditch . . . . .	Roan creek . . . . .	Jan. 21, 1887	15	. . . . .	228	84
The Hayes Ditch . . . . .	Dry Fork of Roan creek . . . . .	Jan. 25, 1887	1.5	. . . . .	243	85

The De LaMartyr & Anderson Ditch . . . . .	Dry Fork of Roan creek . . . . .	Jan. 26, 1887	3	. . . . .	244.5	86
The Mechem Ditch . . . . .	Kimball creek . . . . .	Feb. 7, 1887	1.6	. . . . .	247.5	87
The Omundson & Frost Ditch . . . . .	Dry Fork of Roan creek . . . . .	Feb. 12, 1887	2	. . . . .	249.1	88
The Anderson & Hayes Ditch, first enlargement . . . . .	Dry Fork of Roan creek . . . . .	Feb. 22, 1887	.7	1.7	251.1	89
The G. E. Harris Ditch . . . . .	West Rifle creek . . . . .	Feb. 25, 1887	.9	. . . . .	251.8	90
The Wisdom Ditch, first enlargement . . . . .	Rifle creek . . . . .	Feb. 26, 1887	1	5	252.7	91
The Pioneer Ditch, second enlargement . . . . .	Rifle creek . . . . .	Mar. 1, 1887	2	8.9	253.7	92
The Diamond Ditch, first enlargement . . . . .	Parachute creek . . . . .	Mar. 1, 1887	3.2	5.7	255.7	93
The Williams Ditch . . . . .	Con creek . . . . .	Mar. 2, 1887	2	. . . . .	258.9	94
The Clear Creek Ditch, third enlargement . . . . .	Clear creek . . . . .	Mar. 8, 1887	1.8	11.5	260.9	95
The Gerrieke Ditch . . . . .	Kimball creek . . . . .	Mar. 14, 1887	1.8	. . . . .	262.7	96
The Saints Ditch, second enlargement . . . . .	West Fork of Elk creek . . . . .	Mar. 15, 1887	1	4.2	264.5	97
The Duncan Ditch . . . . .	E. Fork of Dry Elk creek . . . . .	Mar. 20, 1887	.7	. . . . .	265.5	98
The Caughman Ditch . . . . .	Kimball creek . . . . .	April 1, 1887	1.4	. . . . .	266.2	99
The Grand Tunnel Ditch, fourth enlargement . . . . .	Rifle creek . . . . .	April 1, 1887	4	24	267.6	100
The Cannon Ditch, first enlargement . . . . .	Brush creek . . . . .	April 1, 1887	1.8	5	271.6	101
The Hoover Ditch . . . . .	West Fork of Rifle creek . . . . .	April 4, 1887	2.8	. . . . .	273.4	102
The Cataract Ditch, first enlargement . . . . .	Kimball creek . . . . .	April 13, 1887	2.3	4.7	276.2	103
The Squier Ditch, first enlargement . . . . .	Rifle creek . . . . .	April 14, 1887	.7	1.2	278.5	104
The Carr & Himebaugh Ditch . . . . .	Clear creek . . . . .	April 22, 1887	2.2	. . . . .	279.2	105
The Wittingham Ditch . . . . .	{ West or Dry Fork of Elk creek . . . . . }	April 25, 1887	.2	.2	281.4	106
The Raynard Ditch . . . . .	Rifle creek . . . . .	April 25, 1887	7	7	281.6	106

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second previously appropriated in district	Order of priority in district
The Stobaugh Ditch, first enlargement . . . . .	Grand river . . . . .	April 30, 1887	2.6	6.6	288.6	108
The Upper Roan Creek Ditch, second enlargement . . . . .	Carr's Run creek . . . . .	April 30, 1887	1.5	5.7	291.2	109
The Rulison Ditch . . . . .	Cottonwood creek . . . . .	May 4, 1887	2.8	. . . . .	292.7	110
The Cornell Ditch, first enlargement . . . . .	Parachute creek . . . . .	May 5, 1887	.8	4.3	295.5	111
The Cottonwood Ditch, first enlargement . . . . .	Dry Fork of Roan creek . . . . .	May 11, 1887	1	2	296.3	112
The Loveless Ditch . . . . .	Dry Fork of Roan creek . . . . .	May 15, 1887	.8	. . . . .	297.3	113
The Hibschle & Benbow Ditch, first enlargement . . . . .	East Fork of Rifle creek . . . . .	May 15, 1887	.4	1.8	298.1	114
The Dutchman Ditch, first enlargement . . . . .	Dry Fork of Elk creek . . . . .	June 1, 1887	.3	.9	298.5	115
The Wisdom Ditch, second enlargement . . . . .	Rifle creek . . . . .	June 6, 1887	3.6	8.6	298.8	116
The McCabe Ditch . . . . .	Hay Cañon . . . . .	June 10, 1887	.8	. . . . .	302.4	117
The Manning & Ritter Ditch, first enlargement . . . . .	Rifle creek . . . . .	June 25, 1887	.8	1.2	303.2	118
The Raynard Ditch, first enlargement . . . . .	Rifle creek . . . . .	July 18, 1887	3.4	10.4	304	119
The Mullen Ditch . . . . .	Middle F'k of Rifle cr'k . . . . .	Aug. 15, 1887	3.2	. . . . .	307.4	120
The Hibschle, Parris & Mann Ditch, first enlargement . . . . .	East Fork of Rifle creek . . . . .	Oct. 10, 1887	1.3	3.3	310.6	121
The Bastain Ditch . . . . .	Dry Fork of Elk creek . . . . .	Jan. 10, 1888	1	. . . . .	311.9	122

The Benson, Pierson & Nelson Ditch . . . . .	Feb. 5, 1888	4	. . . . .	312.9	123
The Grand Tunnel Ditch, fifth enlargement . . . . .	Feb. 5, 1888	2.5	26.5	316.9	124
The Heinze Ditch, first enlargement . . . . .	Feb. 15, 1888	.8	1.8	319.4	125
The Rifle Creek Ditch No. 1, first enlargement . . . . .	Feb. 20, 1888	.6	1.2	320.2	126
The G. E. Harris Ditch No. 2, first enlargement . . . . .	Mar. 10, 1888	.4	1.2	320.8	127
The Clark Ditch . . . . .	Mar. 15, 1888	1	. . . . .	321.2	128
The Creek & Newman Ditch, second enlargement . . . . .	Mar. 20, 1888	2.8	11.8	322.2	129
The Eagan Ditch . . . . .	April 1, 1888	.4	. . . . .	325	130
The Parachute Ditch . . . . .	April 1, 1888	3.6	. . . . .	325.4	131
The Low Cost Ditch, first enlargement . . . . .	April 1, 1888	9	14	339	132
The Manning Ditch, first enlargement . . . . .	April 1, 1888	.4	2	338	133
The Armstrong Ditch . . . . .	April 25, 1888	4.6	. . . . .	338.4	134
The Dry Fork Ditch, first enlargement . . . . .	April 27, 1888	1	2.4	343	135
The Ware & Hinds Ditch, second enlargement . . . . .	May 1, 1888	5.5	16	344	136
The Whittingham Ditch first enlargement . . . . .	May 1, 1888	.3	.5	349.5	137
The Clear Creek Ditch, fourth enlargement . . . . .	May 1, 1888	.8	12.3	349.8	138
The Hilschle & Benbow Ditch, second enlargement . . . . .	May 10, 1888	2.7	4.5	350.6	139
The A. V. & D. Ditch, first enlargement . . . . .	May 15, 1888	1	2	553.3	140
The West Elk Ditch . . . . .	June 15, 1888	10	. . . . .	354.3	141
The Cornell Ditch, second enlargement . . . . .	July 31, 1888	3	7.3	354.3	142
The Vetter Ditch, first enlargement . . . . .	Oct. 27, 1888	.3	.9	357.3	143
Total in district . . . . .	. . . . .	. . . . .	. . . . .	567.6	

## STATEMENT CONCERNING RESERVOIRS

IN DISTRICT NO. 39, GIVING THE DATE, ORDER OF PRIORITY AND AMOUNT OF EACH APPROPRIATION FOR THE RESERVOIRS IN SAID DISTRICT, AS THE SAME HAVE BEEN ESTABLISHED BY THE DECREE OF COURT IN THE NINTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet decreed to each priority	Summation of decrees to each reservoir	Cubic feet previously appropriated in district	Order of priority in district
The Hilschle Reservoir . . . . .	Rifle creek . . . . .	May 1, 1884	524,000	. . . . .	. . . . .	1
The Thompson Reservoir . . . . .	West Fork of Rifle creek . . . . .	April 1, 1888	844,000	. . . . .	524,000	2
The Saint Reservoir . . . . .	Dry Fork of Elk creek . . . . .	April 26, 1888	1,390,000	. . . . .	1,368,000	3
The O'mundson and Frost Reservoir . . . . .	Dry Fork of Roan creek . . . . .	Aug. 6, 1888	576,000	. . . . .	2,758,000	4
Total in district . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	3,334,000	. . .

*Water District No. 40*—John A. Curtis, Water Commissioner. Residence, Delta, Delta county.

Mr. Curtis was called out June 23, 1889, and continued in the active discharge of his duties until September 23, a period of ninety-six days. He reports that, owing to the great extent of territory comprised within District No. 40, and the large number of small streams from which the ditches draw their supply of water, it became necessary to appoint a number of assistants, which was done, as follows: Frank Woodring, W. B. Aker, E. E. Burt, A. H. Brown and J. S. Neall. His statistical statement for 1889 gives no information further than the names and mileage of ditches.

For 1890, was called out July 8, and reports some trouble on Laroux creek during August, through ditch owners raising head-gates; that several arrests were made, but no convictions. The effect, however, was salutary, as he had very little further trouble. He further reports that, in his opinion, the larger portion of streams in his district will furnish ample water for all lands under them.



## COMMISSIONER'S REPORT, A. D. 1890.

DIVISION No. 5—DISTRICT No. 40.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Preston Ditch . . . . .	.25	220	2	60	3	..	..	16	..	..
The Young Ditch . . . . .	.75	216	1.50	55	12	17	..	10	..	..
The Crawford Clipper Ditch . . . . .	1.50	210	40	3,000	123	10	33	537	..	..
The Daisy Ditch . . . . .	5.25	200	4.25	270	12.50	3	60	28	..	..
The Lone Rock Ditch . . . . .	2.75	205	3.50	170	2.50	..	90	3.50	..	..
The Wilson & Sankey Ditch . . . . .	1.50	191	40 inches	130	35	30	60	3	..	..
The Hill Ditch . . . . .	2.25	204	4	140	3	7	70	7	..	..
The Needle Rock Ditch . . . . .	2	176	7	755	112	15	50	63	..	..
The Gove Ditch . . . . .	1	200	2	145	7	30	..	8	..	..
The Pilot Rock Ditch . . . . .	2.25	210	3.25	385	47	5	..	69	..	..
The Speck Ditch . . . . .	.75	205	1.25	72	..	..	67	..	..	..
The Clear Fork Ditch . . . . .	1.25	209	3.50	260	45	25	57	18	..	..
The Georgia Ditch . . . . .	1	200	20 inches	90	68	..	..	20	..	..

The Fluke Ditch . . . . .	1.50	200	6.5 inches	410	34	23	100	40	..
The Jerome Fluke Ditch . . . . .	1.25	190							..
The R. S. Fluke Ditch . . . . .	.75	190							..
The McIntyre Ditch . . . . .	.50	200	2	130	20	15	2	25	..
The Cathedral Ditch . . . . .	.25	205	2	190	5	10	35	65	..
The Quackenbush Ditch . . . . .	2	220	2	160	22	20	20	40	..
The A. A. Smith Ditch . . . . .	.50	218	20 inches	115	1	..	..	5	..
The Friend Ditch . . . . .	1	218	.10	50	20	..	..	15	..
The Clark & Wade Ditch . . . . .	2	205	6	425	90	15	..	48	..
The Hartman & McIntyre Ditch . . . . .	.75	220	7	300	..	23	210	41	..
The Cluff Ditch . . . . .	1.25	215	1 50	125	6	5	..	22	..
The Crystal Ditch . . . . .	1.25	220	40	1,758	118	107	545	91	..
The Augwine Ditch . . . . .	.50	210	1.50	120	2	3	..	60	..
The McNeil Ditch . . . . .	.12½	200	30 inches	100	2.50	..	..	10	..
The Cedar Ridge Ditch . . . . . (Not used)	.75	..	..	..	..	..	..	..	..
The L. Gilwick Ditch . . . . .	1	200	1	160	25	..	8	..	..
The German Ditch . . . . .	2.75	210	3.50	480	35	..	..	74	..
The Holy Terror Ditch . . . . .	.75	200	.60	40	3	..	{ 11 acres } { in fruit }	11	..
The Alfalfa Ditch . . . . .	7.25	Continuously	12	3,520	720	300	..	1,800	..
The Irwin Ditch . . . . .	.25	..	.25	20	..	..	2	8	..
The Currant Creek Ditch . . . . .	6	..	3	750	200	..	200	335	..
The Hotchkiss Ditch . . . . .	1	..	1.70	30	..	..	..	11	..

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Lecroux Ditch . . . . .	5	. . .	17.70	1,500	331	15	. . .	519	. . .	. . .
The Hall & Yoder . . . . .	1.50	. . .	1.20	200	20	. . .	. . .	33	. . .	. . .
The Peterson, Carr & Barrow . . . . .	2.50	. . .	8	880	140	. . .	. . .	33	. . .	. . .
The High Line Ditch . . . . .	8	. . .	3.75	750	34	. . .	. . .	76	. . .	. . .
The Patterson Ditch . . . . .	4	. . .	3.20	400	29	. . .	. . .	73	. . .	. . .
The Ellington Ditch . . . . .	4	. . .	2	320	71	. . .	. . .	21	. . .	. . .
The Allen Mesa Ditch . . . . .	3	. . .	3.60	450	42	2	. . .	58	. . .	. . .
The Allen Ditch . . . . .	2.50	. . .	3.20	410	29	. . .	. . .	73	. . .	. . .
The Preston Ditch . . . . .	.25	220	2	60	3	. . .	. . .	16	. . .	. . .
The Young Ditch . . . . .	.75	216	1.50	55	12	17	. . .	10	. . .	. . .
The Crawford Clipper Ditch . . . . .	1.50	210	40	3,000	123	10	33	537	. . .	. . .
The Daisy Ditch . . . . .	5.25	200	4.25	270	12.5	3	60	28	. . .	. . .
The Lone Rock Ditch . . . . .	2.75	205	3.50	170	2.5	. . .	90	3.5	. . .	. . .
The Wilson & Sankey Ditch . . . . .	1.50	191	1	130	35	30	60	3	. . .	. . .

The Hill Ditch . . . . .	2.25	204	4	140	3	7	70	7	. . . . .
The Needle Rock Ditch . . . . .	2	176	7	755	112	15	50	63	. . . . .
The Gove Ditch . . . . .	1	200	2	145	7	30	. . . . .	8	. . . . .
The Pilot Rock Ditch . . . . .	2.25	210	3.25	385	47	5	. . . . .	69	. . . . .
The Speck Ditch . . . . .	.75	205	1.50	72	. . .	. . . . .	67	. . . . .	. . . . .
The Clear Fork Ditch . . . . .	1.25	209	3.50	260	45	25	57	18	. . . . .
The Georgia Ditch . . . . .	1	200	.50	90	65	. . . . .	. . . . .	20	. . . . .
The Fluke Ditch . . . . .	1.50	200	}			. . . . .	. . . . .	. . . . .	. . . . .
The Jerome Fluke Ditch . . . . .	1.25	190				23	100	40	. . . . .
The R. S. Fluke . . . . .	.75	190							
The McIntyre Ditch . . . . .	.50	200	2	130	20	15	2	25	. . . . .
The Cathedral Ditch . . . . .	.25	205	2	190	5	10	35	65	. . . . .
The Quackenbush Ditch . . . . .	2	220	2	160	22	20	20	40	. . . . .
The A. A. Smith Ditch . . . . .	.50	218	.50	115	1	. . . . .	. . . . .	5	. . . . .
The Friend Ditch . . . . .	1	213	.25	50	20	. . . . .	. . . . .	15	. . . . .
The Clark & Wade Ditch . . . . .	2	205	6	425	90	15	. . . . .	48	. . . . .
The Hartman & McIntyre Ditch . . . . .	.75	220	7	300	. . . . .	23	210	41	. . . . .
The Cluff Ditch . . . . .	1.25	215	1.50	125	6	5	. . . . .	22	. . . . .
The Crystal Ditch . . . . .	1.25	220	40	1,758	118	107	545	91	. . . . .
The Angevine Ditch . . . . .	.50	210	1.50	120	2	3	. . . . .	60	. . . . .
The McNeil Ditch . . . . .	.13	210	.75	100	2.5	. . . . .	. . . . .	10	. . . . .

## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
* The Cedar Ridge Ditch . . . . .	.75	..	..	..	..	..	..	..	..	..
The L. Gilwick Ditch . . . . .	1	200	1	160	25	..	8	..	..	..
The German Ditch . . . . .	2.75	210	3.50	480	35	..	..	74	..	..
The Holy Terror Ditch . . . . .	.75	200	1.50	40	3	..	..	11	..	..
Totals in district . . . . .	86.38	..	..	16,805	2,465	680	1,609	4,369.5	..	9,123.5

\* Not used.

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 40, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Feeder Ditch . . . . .	Gulches Nos. 1, 2, 3	May 3, 1889	April 24, 1889	20	Thomas B. Hanoum <i>et al</i>
The Chenoweth Ditch . . . . .	{ Waste and seep- age waters . . }	Oct. 22, 1889	Aug. 17, 1889	3	Isaac E. Chenoweth
The Braisted Ditch . . . . .	Gunnison river . .	Oct. 24, 1889	Oct. 10, 1889	9	Horace K. Braisted
The Relief Ditch . . . . .	Gunnison river . .	Dec. 25, 1889	Dec. 14, 1889	15.06	Robert Landreth <i>et al</i>
The Low Line Ditch . . . . .	{ North Fork Gun- nison river . . }	Feb. 15, 1890	Oct. 15, 1889	6.70	John W. Cotton
The Hartland Ditch, amended statement . . . . .	Gunnison river . .	May 27, 1890	Not given	52.50	J. Rollins <i>et al</i>
The Black Cañon Ditch . . . . .	Gunnison river . .	June 23, 1890	Mar. 25, 1890	28.30	Matt Arch
The Diamond Joe Ditch . . . . .	Smith's Fork . . .	July 21, 1890	Jan. 10, 1890	6.25	John C. Smith
The Sand Creek Ditch . . . . .	Sand creek . . . .	July 25, 1890	May 7, 1890	20	A. J. King <i>et al</i>
The Anderson Ditch . . . . .	{ Guilford and Daniels creek }	Aug. 1, 1890	April 25, 1890	2.64	Henry W. Anderson
The Turner and Sweezy Ditch . . . . .	{ Minnesata creek Camp, Cotton- wood, Beaver, Kiser, Lack and Surface creeks }	Aug. 11, 1890	Mar. 1, 1888	3.82	Elijah P. Turner <i>et al</i>
The Surface Creek Ditch, amended statement . . . . .	Well gulch . . . .	Aug. 16, 1890	Not given	127	The Surface Creek Ditch and Reservoir Co.
The Well Gulch Ditch . . . . .		Oct. 25, 1890			Not given. Plat only



## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 40, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Park Reservoir, . . . . .	W. Br. Surface Creek . . . . .	On the stream . . . . .	Nov. 6, 1889	Aug. 18, 1889	130,400,232	J. B. Hart and 12 others
The Currant Creek Reservoir, . . . . .	Currant creek . . . . .	On the stream . . . . .	Mar. 26, 1890	Not given	17,424,000	Peter Magnus
No. 1 . . . . .	Kiser creek . . . . .	On the stream . . . . .	Aug. 15, 1890	Sept. 6, 1886	36,400,000	
No. 2 . . . . .	Kiser creek . . . . .	On the stream . . . . .	Aug. 16, 1890	Sept. 6, 1886	28,500,000	
No. 3 . . . . .	Kiser creek . . . . .	On the stream . . . . .	Aug. 16, 1890	July 29, 1889	5,427,200	
No. 4 . . . . .	Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	Aug. 11, 1886	16,280,600	
No. 5 . . . . .	Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	Aug. 11, 1886	45,738,000	
No. 6 . . . . .	Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	July 29, 1889	5,427,200	The Surface Creek Ditch and Reservoir Compy
No. 7 . . . . .	Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	Aug. 11, 1886	10,318,300	
No. 8 . . . . .	W. Br. Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	July 29, 1889	86,248,800	
No. 9 . . . . .	W. Br. Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	July 29, 1889	3,920,000	
No. 10 . . . . .	W. Br. Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	July 29, 1889	4,791,600	
No. 11 . . . . .	W. Br. Ward creek . . . . .	On the stream . . . . .	Aug. 16, 1890	July 29, 1889	4,356,000	
The Weir & Johnson Reservoir } No 1 . . . . .	Not given . . . . .	On the stream . . . . .	Oct. 15, 1890	June 25, 1887	4,356,000	Albert A. Weir and Erick Johnson

The Weir & Johnson Reservoir { No. 2 . . . . .	Not given . . . . .	On the stream . . . . .	Oct. 15, 1890	June 25, 1887	12,380,000	Albert A. Weir and Erick Johnson . . . . .
The Bonito Reservoir . . . . .	Not given . . . . .	On the stream . . . . .	Oct. 20, 1890	Sept. 11, 1890	4,181,000	. . . . . William C. Stone
The Well Gulch Reservoir . . . . .	Well gulch . . . . .	On the stream . . . . .	Oct. 25, 1890	Not given	4,350,000	. . . . . Not given
The Lake Reservoir . . . . .	Not given . . . . .	On the stream . . . . .	Oct. 25, 1890	Not given	61,000,000	. . . . . Not given
The J. C. Gunn Reservoir . . . . .	Not given . . . . .	On the stream . . . . .	Oct. 25, 1890	Not given	816,750	. . . . . Not given
The Twin Lakes Reservoir No. 1 . . . . .	. . . . .	The lake itself . . . . .	Nov. 6, 1890	Sept. 25, 1889	9,500,000	. . . . . C. H. Gresham <i>et al</i>
The Twin Lakes Reservoir No. 2 . . . . .	. . . . .	The lake itself . . . . .	Nov. 6, 1890	Sept. 25, 1889	7,000,000	. . . . . C. H. Gresham <i>et al</i>
The A. A. Smith Reservoir . . . . .	East Fork of Bell creek . . . . .	Feeder ditch . . . . .	Nov. 25, 1890	Aug. 26, 1890	2,613,000	. . . . . A. A. Smith

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 40, PREPARED BY THE SUPERINTENDENT OF IRRIGATION OF WATER DIVISION No. 5, FROM THE CERTIFIED COPY OF THE DECREE GOVERNING APPROPRIATIONS IN THIS DISTRICT, FURNISHED HIM BY THE CLERK OF THE DISTRICT COURT.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet of water previously appropriated in district	No. on stream	Order of priority in district
The Alfalfa Ditch . . . . .	Surface creek . . . . .	Dec. 17, 1881	106	. . . . .	. . . . .	1	1
The Speck Ditch . . . . .	Clear Fork . . . . .	Jan. 15, 1882	1	. . . . .	106	1	2
The Garden Ditch . . . . .	Surface creek . . . . .	Feb. 4, 1882	1	. . . . .	107	2	3
The Cook Ditch . . . . .	Surface creek . . . . .	Mar. 1, 1882	1	. . . . .	108	3	4
The Santa Fé Ditch . . . . .	Forked Tongue, etc. . . . .	Mar. 1, 1882	1	. . . . .	109	1	4a
The Irving Ditch . . . . .	Leroux creek . . . . .	April 1, 1882	1	. . . . .	110	1	5
The Cluff Ditch . . . . .	Cottonwood creek . . . . .	April 1, 1882	1	. . . . .	111	1	5a
The Forked Tongue Ditch . . . . .	Forked Tongue, etc. . . . .	April 15, 1882	9.13	. . . . .	112	2	6
The Alkali Ditch . . . . .	Alkali creek No. 1 . . . . .	April 15, 1882	1	. . . . .	121.13	1	6a
The Kiser Ditch . . . . .	Forked Tongue, etc. . . . .	June 1, 1882	2.60	. . . . .	122.13	3	7
The McIntyre Ditch . . . . .	Little Clear creek . . . . .	July 1, 1882	1	. . . . .	124.73	1	8
The West Ditch . . . . .	Forked Tongue, etc. . . . .	Feb. 1, 1883	5.60	. . . . .	125.73	4	9

The Preston Ditch . . . . .	Smith's Fork . . . . .	Feb. 4, 1883	1	. . . . .	131.33	1	10
The Broncho Ditch . . . . .	Forked Tongue, etc. . . . .	April 16, 1883	2.50	. . . . .	132.33	5	11
The Quackenbush Ditch. . . . .	Bill creek . . . . .	May 1, 1883	8	. . . . .	134.83	1	12
The Clark & Wade Ditch . . . . .	Minnesota creek. . . . .	May 5, 1883	4.50	. . . . .	142.83	1	13
The Orchard Ranch Ditch . . . . .	Surface creek . . . . .	May 9, 1883	25	. . . . .	147.33	4	14
The Sandstone Bluff Ditch . . . . .	Forked Tongue, etc. . . . .	June 1, 1883	10.50	. . . . .	172.33	6	15
The Park Ditch . . . . .	Forked Tongue, etc. . . . .	June 30, 1883	6	. . . . .	182.83	7	16
The Current Creek Ditch . . . . .	Leroux creek. . . . .	Aug. 4, 1883	10	. . . . .	188.83	2	17
The Hotchkiss Ditch . . . . .	Leroux creek. . . . .	Aug. 11, 1883	1.70	. . . . .	198.83	3	18
The Kennicut & Mower Ditch . . . . .	Forked Tongue, etc. . . . .	Aug. 15, 1883	7.13	. . . . .	200.53	8	19
The Clark & Wade Ditch, second appropriation . . . . .	Minnesota creek. . . . .	Aug. 18, 1883	2.50	7	207.66	2	20
The Leroux Ditch . . . . .	Leroux creek . . . . .	Aug. 20, 1883	43	. . . . .	210.16	4	21
The Clear Fork Ditch . . . . .	Clear Fork. . . . .	Oct. 1, 1883	8	. . . . .	253.16	2	22
The Hartman & McEntyre Ditch. . . . .	Muddy creek . . . . .	Oct. 9, 1883	10	. . . . .	261.16	1	23
The Cedar Cañon and Iron Spring Ditch . . . . .	Crystal creek. . . . .	Oct. 24, 1883	50	. . . . .	271.16	1	24
The Cathedral Ditch. . . . .	Little Clear Fork. . . . .	Nov. 1, 1883	4	. . . . .	321.16	2	25
The Fawcett Ditch . . . . .	Holy Terror creek . . . . .	Nov. 13, 1883	2	. . . . .	325.16	1	26
The Myers and Orth Ditch . . . . .	German creek . . . . .	Dec. 11, 1883	4	. . . . .	327.16	1	27
The Maud S. Ditch . . . . .	Dough-spoon creek . . . . .	Jan. 11, 1884	4	. . . . .	331.16	1	28
The Peterson, Carr and Barrow Ditch . . . . .	Leroux creek. . . . .	Feb. 18, 1884	22.50	. . . . .	335.16	5	29
The Georgia Ditch . . . . .	Clear Fork . . . . .	Mar. 15, 1884	1	. . . . .	357.66	3	30
The Settle Ditch . . . . .	Surface creek . . . . .	Mar. 25, 1884	15	. . . . .	358.66	5	31

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Spring Ditch . . . . .	Alkali creek No. 1 . . . . .	Mar. 25, 1884	8	. . . . .	373.66	2	31a
The Cedar Ridge Ditch . . . . .	Alkali creek No. 2 . . . . .	April 1, 1884	1	. . . . .	381.66	1	32
The Young Ditch . . . . .	Smith's fork . . . . .	Sept. 15, 1884	1	. . . . .	382.66	2	33
The Shepherd Ditch . . . . .	Surface creek . . . . .	Oct. 25, 1884	13.50	. . . . .	383.66	6	34
The Hall & Yoder Ditch . . . . .	Leroux creek . . . . .	Nov. 4, 1884	4	. . . . .	397.16	6	35
The Childs Ditch . . . . .	Forked Tongue, etc . . . . .	Nov. 28, 1884	6	. . . . .	401.16	9	36
The Red Bluff Ditch . . . . .	Forked Tongue, etc . . . . .	Nov. 30, 1884	16	. . . . .	407.16	10	37
The Lucas Ditch . . . . .	Angwine creek . . . . .	Dec. 15, 1884	4	. . . . .	423.16	1	38
The Howard Ditch . . . . .	Surface creek . . . . .	Jan. 21, 1885	.50	. . . . .	427.16	7	39
The Big Falls Ditch . . . . .	Surface creek . . . . .	Jan. 21, 1885	6.50	. . . . .	427.66	8	39a
The Still water Ditch . . . . .	Surface creek . . . . .	Jan. 21, 1885	8	. . . . .	434.16	9	39b
The Gard Ditch . . . . .	Forked Tongue, etc . . . . .	Mar. 1, 1885	.60	. . . . .	442.16	11	40
The Gelwick Ditch . . . . .	McDonald creek . . . . .	Mar. 11, 1885	2	. . . . .	442.76	1	41
The Fogg Ditch . . . . .	Surface creek . . . . .	April 2, 1885	15	. . . . .	444.76	10	42
The Forest Ditch . . . . .	Surface creek . . . . .	April 7, 1885	10.25	. . . . .	459.76	11	43



The Cedar Park Ditch . . . . .	Forked Tongue, etc. . . . .	May 25, 1885	8	. . . . .	470.01	12	44
The Oak Valley Ditch . . . . .	Forked Tongue, etc. . . . .	June 1, 1885	4	. . . . .	478.01	13	45
The Crawford Clipper Ditch . . . . .	Smith's fork . . . . .	Oct. 19, 1885	83.52	. . . . .	482.01	3	46
The Fluke Ditch . . . . .	Clear fork . . . . .	Oct. 27, 1885	11.25	. . . . .	505.53	4	47
The Butler's Ditch . . . . .	Surface creek . . . . .	Nov. 24, 1885	12	. . . . .	576.78	12	48
The High Line Ditch . . . . .	Leroux creek . . . . .	Dec. 1, 1885	18.50	. . . . .	588.78	7	49
The Erick Johnson Ditch . . . . .	Surface creek . . . . .	Dec. 2, 1885	1.50	. . . . .	607.28	13	50
The Butler Ditch, second appropriation . . . . .	Surface creek . . . . .	Feb. 8, 1886	3	15	608.78	14	51
The Fogg Ditch, second appropriation . . . . .	Surface creek . . . . .	Mar. 20, 1886	1	16	611.78	15	52
The Forest Ditch, second appropriation . . . . .	Surface creek . . . . .	April 10, 1886	.75	11	612.78	16	53
The Big Fall Ditch, second appropriation . . . . .	Surface creek . . . . .	April 12, 1886	1.50	8	613.53	17	54
The Gove Ditch . . . . .	Coal creek . . . . .	April 14, 1886	12	. . . . .	615.03	1	55
The Pilot Rock Ditch . . . . .	Coal creek . . . . .	April 16, 1886	5.50	. . . . .	627.03	2	56
The Perkins Ditch . . . . .	Forked Tongue, etc. . . . .	April 20, 1886	7.50	. . . . .	632.53	14	57
The Sessions Ditch . . . . .	Forked Tongue, etc. . . . .	April 21, 1886	.75	. . . . .	640.03	15	58
The McNeil Ditch . . . . .	McNeil creek . . . . .	July 12, 1886	1.60	. . . . .	640.78	1	59
The Lake Fork Ditch . . . . .	Forked Tongue, etc. . . . .	July 26, 1886	10.15	. . . . .	642.38	16	60
The A. A. Smith Ditch . . . . .	Bill creek . . . . .	Aug. 20, 1886	2.60	. . . . .	652.53	2	61
The Old Reliable Ditch . . . . .	Surface creek . . . . .	Dec. 31, 1886	11	. . . . .	655.13	18	62
The Patterson Ditch . . . . .	Leroux creek . . . . .	Mar. 29, 1887	16	. . . . .	666.13	8	63
The Ellington Ditch . . . . .	Leroux creek . . . . .	April 2, 1887	9	. . . . .	682.13	9	64
The Horse Shoe Ditch . . . . .	Surface creek . . . . .	April 11, 1887	15	. . . . .	691.13	19	65



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated in district	No. on stream	Order of priority in district
The Allan Mesa Ditch . . . . .	Leroux creek . . . . .	April 29, 1887	20	. . . .	706.13	10	66
The Carbon Ditch . . . . .	Forked Tongue, etc . . . .	June 20, 1887	1	. . . .	726.13	16	67
The Allan Ditch . . . . .	Leroux creek . . . . .	June 21, 1887	7	. . . .	727.13	11	68
The Spruce Tree Ditch . . . . .	Surface creek . . . . .	July 9, 1887	1	. . . .	734.13	20	69
The Barlow Ditch . . . . .	North Fork . . . . .	July 10, 1887	1	. . . .	735.13	1	70
The Daisy Ditch . . . . .	Smith's Fork . . . . .	Oct. 11, 1887	12	. . . .	736.13	4	71
The Desire Friend Ditch . . . . .	Bill creek . . . . .	Nov. 25, 1887	2	. . . .	748.13	3	72
The Lone Rock Ditch . . . . .	Smith's Fork . . . . .	Dec. 20, 1887	4.50	. . . .	750.13	5	73
The Gerome Ditch . . . . .	Clear Fork . . . . .	Jan. 10, 1888	2	. . . .	754.63	5	74
The R. T. Fluke Ditch . . . . .	Clear Fork . . . . .	Jan. 14, 1888	4	. . . .	756.63	6	75
The Wilson and Pankey Ditch . . . . .	Smith's Fork . . . . .	Jan. 20, 1888	3.50	. . . .	760.63	6	76
The Hice Ditch . . . . .	Smith's Fork . . . . .	Jan. 25, 1888	4	. . . .	764.13	7	77
The Eubank and Gower Ditch . . . . .	German creek . . . . .	Feb. 1, 1888	2.50	. . . .	768.13	2	78
The Needle Rock Ditch . . . . .	Smith's Fork . . . . .	July 16, 1888	25	. . . .	770.63	8	79
The Perkins Ditch, second appropriation . . . . .	Forked Tongue, etc . . . .	Not given	1.50	9	795.63 797.63	18	.

*Water District No. 41*—A. L. Selig, Montrose, Colorado, Commissioner for 1889, and D. G. Salisbury, Delta, Delta county, for 1890.

Commissioner Selig reports for 1889, that he was called out May 20, and continued in service until September; that considerable difficulty was experienced during the season, owing to the very low stage of water in the Uncompahgre river, as well as from the fact that it was the first season water had been distributed by a Water Commissioner.

He further reports that several large ditches were drawing water from the Uncompahgre river, with their head-gates located on the military reservation on the upper part of the river, whose priorities are subsequent to those of several ditches on the lower end of the stream, near Delta; but, owing to the fact that said reservation is under martial law, it was found impossible to regulate the head-gates of these ditches, as the owners would break off locks and open their gates as fast as they were shut down by the Commissioner.

In July, by mutual agreement of ditch owners, the river was divided into three districts, and the waters rotated, giving each district water during two days of each week; but this arrangement was soon broken by the demands of older ditches for their water.

He also reports a great injustice to consumers of water in this district, in the fact there is no adjudication of water rights in District No. 68, embracing twenty-five miles of the upper Uncompahgre river and all of its principal tributaries, and hence no regulation of the distribution.

Most of the ditches in this district are new, supplied with rotary flumes.

Two assistants were employed during the season.

Commissioner Selig submits statistical statement, which is wanting in much of the data sought, for reason therein assigned that, "owners of ditches refuse to furnish the necessary information."

For 1890, Commissioner Salisbury reports to Superintendent as being called out July 10, and continued service with one assistant until November 20; that the distribution of the waters of the district were very satisfactory, with the exception of the question of his jurisdiction as to ditches and canals taking their supply of water from the river on the U. S. Military Reservation. As the same question had arisen the previous season, it was deemed advisable to have it passed upon by the courts. With this end in view, complaint was made before Hon. J. C. Bell, judge of the District Court for Montrose county, praying that a warrant should issue from his court for the arrest and punishment of the party named, in accordance with the law, for tampering with the head-gate after it had been closed by the Commissioner. As to the charges in the complaint, there was no dispute, as the defendant acknowledged them.

The court held that he had no jurisdiction over acts committed upon a military reservation, and refused to issue any warrant for the party. The Commissioner, therefore, discontinued further efforts to regulate the gates of all ditches so situated, and as a consequence, a much larger quantity of water was carried by them during the entire season of low water than they were entitled to carry, to the great injury of the people lower down the river.

It is perhaps well here to state that the Superintendent of this division reported the circumstances connected with the above unlawful diversion of water, during the summer of 1889, and requested instructions thereon.

From this statement, it appears that the Uncompahgre river passed through a small portion of the military res-

ervation, that certain ditches had their head-gates located within the boundaries of the same, and that the water-rights of said ditches had been adjudicated by the State courts and decrees issued thereon, but that the right to regulate their head-gates had been denied and resisted on the ground of their peculiar location.

It appeared to this Department, that if the State courts took cognizance of ditches thus situated, so far as to adjudicate their rights to water, determining the quantity to which they were entitled, and the date of their priority, it was reasonable to infer that the State would also have the right to regulate the intake of the ditches, in accordance with the decrees so issued; accordingly instructions were given the Water Commissioner to close and lock the gates wherever the ditches were not entitled to water. This was attempted by the Commissioner, with the result above stated.

The Water Commissioner further reports the seepage water in his district very preceptably on the increase, not only in the natural streams, but in heretofore dry gulches and arroyas under the lines of ditches, and that it is being very generally taken advantage of by the residents wherever it is practicable to do so.

In response to inquiries relative to reservoirs and reservoir sites, he reports the district abundantly supplied with favorable sites, but that little has been done toward their location or construction.

## COMMISSIONER'S REPORT, A. D. 1890.

## DIVISION No. 5—DISTRICT No. 41.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres of fruit	Total number of acres irrigated in district
The Ironstone Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1,140	. . . . .	. . . . .	2,210	90	. . . . .
The Hull Private Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	16	. . . . .	. . . . .	74	3	. . . . .
The Ross Brothers Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	58	. . . . .	21	159	10	. . . . .
The Eagle Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	255	. . . . .	165	407	5	. . . . .
The Satisfaction Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	67	. . . . .	10	99	17	. . . . .
The Home Run Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	386	. . . . .	120	440	9	. . . . .
The Home Stake Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	60	. . . . .	300	25	2	. . . . .
The J. L. Foster Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	90	. . . . .	20	6	. . . . .	. . . . .
The Delta Chief Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	149	. . . . .	35	448	15	. . . . .
The Colorow Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	115	. . . . .	155	98	8	. . . . .
The East Side Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	37	. . . . .	3	57	4	. . . . .
The Swanson Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	24	. . . . .	55	40	8	. . . . .
The Egggeston Ditch . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	15	. . . . .	62	182	1	. . . . .



The Purdy Wickers Ditch . . . . .	33	5	200	5	...
The Stitzler Ditch . . . . .	33	9	149	9	...
The Rice Ditch . . . . .	...	...	45	...	...
The Eckerly Ditch . . . . .	214	20	404	20	...
The Garnett Ditch . . . . .	411	78	318	78	...
The Chipeta Beaudry Ditch . . . . .	281	14	187	14	...
The Boulds & Mauney Ditch . . . . .	64	7	141	7	...
The Uncompahgre Ditch . . . . .	107	11	93	11	...
The Uncompahgre Canal . . . . .	4,292	462	7,865	462	...
The Logan Ditch . . . . .	166	6	174	6	...
The Reservation Ditch . . . . .	300	15	245	15	...
The Stark, Valkman & Co.'s Ditch . . . . .	12	5	49	5	...
The Supply Ditch . . . . .	18	6	125	6	...
The Valverde Ditch . . . . .	160	4	25	4	...
The Ben Davis Ditch . . . . .	2	1	17	1	...
The Midland Ditch . . . . .	145	86	351	86	...
The Loutsenhizer Ditch . . . . .	371	134	1,214	134	...
The Chipeta Ditch . . . . .	362	17	88	17	...
The Silver Springs Ditch . . . . .	75	2	51	2	...
The Woodgate & Calloway Ditch . . . . .	1	...	6	...	...
The Plymouth Rock Ditch . . . . .	13	2	137	2	...
The Uncompahgre & Cedar C.Val. Ditch . . . . .	56	2	230	2	...



## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres of fruit	Total number of acres irrigated in district
The Kelstrom Ditch . . . . .	..	..	..	..	..	..	..	20	..	..
The Private Ditch . . . . .	..	..	..	..	30	22	35	27	9	..
The Anderson Ditch . . . . .	..	..	..	..	82	4	5	113	5	..
From springs and seepage . . . . .	..	..	..	..	10	..	..	10	..	..
The Geo. B. Jones and N. Mesa Ditch .	..	..	..	..	116	..	..	343	44	..
Totals in district . . . . .	..	..	..	..	9,766	369	1,728	16,872	1,116	29,851

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 41, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890, FOR WHICH NO DECREES HAVE AS YET BEEN ISSUED.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Magnolia Ditch . . . . .	Mexican gulch . . . . .	April 6, 1889	Feb. 1, 1889	29	. . . . . David Wood
The Seepage Ditch . . . . .	{ No. 1 . . . . .	May 16, 1889	April, 1885	18.48	} . . . . . John J. Marsh
	{ No. 2 . . . . .	May 16, 1889	April, 1885	7	
The Wilson Davis Ditch, amended plat . . . . .	Uncompahgre river . . . . .	Dec. 26, 1889	Not given	Not given	. . . . . Not stated
The Lyra Ditch . . . . .	Dry creek . . . . .	Jan. 27, 1890	Dec. 19, 1889	9.30	Nelson Vizina and George E. Carver
The Prospect Ditch . . . . .	Seepage waters . . . . .	Feb. 8, 1890	Feb. 4, 1890	20	. . . . . The town of Delta
The Flying Dutchman Ditch . . . . .	Dry creek . . . . .	Mar. 12, 1890	Feb. 10, 1890	4	. . . . . Emma E. Talcott
The Krebs Ditch . . . . .	Not given . . . . .	April 19, 1890	Feb. 4, 1890	14	. . . . . John F. Krebs
The Montrose Canal Extension . . . . .	Gulch, unnamed . . . . .	April 25, 1890	Jan. 1, 1890	41	. . . The Montrose Canal Company
The Griffith and Fadely Ditch . . . . .	{ Waste and seepage waters . . . . .	May 19, 1890	Not given	9	Thomas A. Griffith and Henry Fadely
The Snipe Creek Ditch . . . . .	{ Waste, seepage and spring waters . . . . .	June 13, 1890	May 1, 1890	5.50	} . . . . . James McLachlan
	Dry creek . . . . .	June 13, 1890	Nov. 15, 1886	5	
The Chapperal Ditch . . . . .					

### STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT NO. 41, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Magnolia Reservoir . . .	Mexican Gulch . . .	On the stream . . .	April 6, 1889	Jan. 1, 1889	24,175,800	. . . . . David Wood

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 41, GIVING THE DATE AND ORDER OF PRIORITY AND AMOUNT OF EACH APPROPRIATION, TOGETHER WITH THE TOTAL AMOUNT OF EACH PRECEDING APPROPRIATION OF DITCHES AND CANALS IN SAID DISTRICT, AS THEY HAVE BEEN ESTABLISHED BY DECREE OF COURT IN THE SEVENTH JUDICIAL DISTRICT, FROM THE CERTIFIED COPY OF THE DECREE AS FURNISHED BY THE CLERK OF THE COURT.

NAME OF DITCH, CANAL OR RESERVOIR	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch, canal or reservoir	Cubic feet per second appropriated in district	Order of priority in district
The Reservation (U. S.) Ditch . . . . .	Uncompahgre river . . .	July 1, 1880	2.69	. . . . .	. . . . .	1
The Eggleston Ditch . . . . .	Uncompahgre river . . .	Nov. 21, 1881	6	. . . . .	2.69	2
The Uncompahgre Ditch, Delta county . . . . .	Uncompahgre river . . .	Dec. 8, 1881	12	. . . . .	8.69	3
The Homestake Ditch . . . . .	Uncompahgre river . . .	Jan. 5, 1882	11	. . . . .	20.69	4
The Gus. A. Frost Ditch . . . . .	Uncompahgre river . . .	Jan. 27, 1882	2.50	. . . . .	31.69	5
The Hull Private Ditch . . . . .	Uncompahgre river . . .	Feb. 3, 1882	3	. . . . .	34.19	6
The Eagle Ditch . . . . .	Uncompahgre river . . .	Feb. 10, 1882	17.85	. . . . .	37.19	7
The Satisfaction Ditch . . . . .	Uncompahgre river . . .	Feb. 11, 1882	12	. . . . .	55.04	8
The Uncompahgre (Loutsenhizer) Ditch . . . . .	Uncompahgre river . . .	Feb. 23, 1882	18	18	67.04	9
The Chipeta-Beaudry Ditch . . . . .	Uncompahgre river . . .	Mar. 1, 1882	9	9	85.04	10
The Delta Ditch . . . . .	Uncompahgre river . . .	Mar. 2, 1882	15	. . . . .	94.04	11
The West Montrose Ditch . . . . .	Uncompahgre river . . .	Mar. 10, 1882	8	. . . . .	109.04	12
The Sunrise Ditch . . . . .	Uncompahgre river . . .	April 30, 1882	6	6	117.04	13

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each reservoir	Cubic feet previously appropriated in district	Order of priority in district
The Rice Ditch . . . . .	Uncompahgre river . . .	April 30, 1882	7.50	. . . . .	123.04	14
The Swanson Ditch . . . . .	Uncompahgre river . . .	May 1, 1882	5.50	. . . . .	130.54	15
The Supply Ditch . . . . .	Uncompahgre river . . .	May 7, 1882	2	. . . . .	136.04	16
The Dry Creek Ditch . . . . .	Dry creek . . . . .	June 1, 1882	.98	. . . . .	138.04	17
The S. E. Dillon Ditch . . . . .	Spring creek . . . . .	Oct. 1, 1882	.99	. . . . .	139.02	18
The Foster Ditch . . . . .	Uncompahgre river . . .	Oct. 1, 1882	2.50	. . . . .	140.01	
The Stark, Volkman, Rose, Silvers Ditch . . . . .	Uncompahgre river . . .	Oct. 12, 1882	13	. . . . .	142.51	19
The Ross Bros. Ditch . . . . .	Uncompahgre river . . .	Nov. 1, 1882	6	. . . . .	155.51	20
The Ross Bros. Ditch . . . . .	Spring creek . . . . .	Nov. 1, 1882	6	. . . . .	161.51	
The Ironstone Ditch . . . . .	Uncompahgre river . . .	Nov. 7, 1882	37.50	. . . . .	167.51	21
The Foster Ditch, first enlargement . . . . .	Uncompahgre river . . .	Nov. 27, 1882	1.83	4.33	205.01	22
The Cushman Ditch . . . . .	Dry creek . . . . .	Dec. 17, 1882	96.50	. . . . .	206.84	23
The Val Verde Ditch . . . . .	Uncompahgre river . . .	Feb. 20, 1883	5	. . . . .	303.34	24
The Uncompahgre (Loutsenhizer) Ditch, first enlargement . . . . .	Uncompahgre river . . .	Feb. 23, 1883	39	57	308.34	25
The Stiteler Ditch . . . . .	Uncompahgre river . . .	Mar. 2, 1883	2.05	. . . . .	347.34	26



The Uncompahgre Canal . . . . .	Uncompahgre river . . . . .	April 7, 1883	100	100	349.39	27
The Ben Davis Ditch . . . . .	Uncompahgre river . . . . .	May 1, 1883	3	3	449.39	28
The Neugart Ditch . . . . .	Spring creek . . . . .	June 1, 1883	2.08	2.08	452.39	29
The Spring Valley Ditch . . . . .	Spring creek . . . . .	June 13, 1883	65.10	65.10	454.47	30
The Garnett Ditch . . . . .	Uncompahgre river . . . . .	June 18, 1883	45	45	519.57	31
The Home-Run Ditch . . . . .	Uncompahgre river . . . . .	Aug. 25, 1883	25	25	564.57	32
The Selig Ditch . . . . .	Uncompahgre river . . . . .	Oct. 29, 1883	14.50	14.50	589.57	33
The Geo. B. Jones and North Mesa Ditch . . . . .	Uncompahgre river . . . . .	Nov. 30, 1883	7	7	604.07	34
The Buckhorn Ditch . . . . .	Beaton creek . . . . .	Dec. 10, 1883	6.25	6.25	611.07	35
The Woodgate & Calloway Ditch . . . . .	Uncompahgre river . . . . .	Dec. 15, 1883	2	2	617.32	36
The Chipeta (Montrose Co.) Ditch . . . . .	Uncompahgre river . . . . .	Jan. 24, 1884	17.50	17.50	619.32	37
The Keystone Ditch . . . . .	Spring creek . . . . .	Mar. 7, 1884	14.58	14.58	636.82	38
The Montrose City Ditch . . . . .	Uncompahgre river . . . . .	April 5, 1884	18	18	651.40	39
The Uncompahgre Canal, additional appropriation . . . . .	Uncompahgre river . . . . .	April 7, 1884	100	200	669.40	40
The Beaton Ditch . . . . .	Beaton creek . . . . .	April 10, 1884	8.33	8.33	769.40	41
The Sunrise Ditch, first enlargement . . . . .	Uncompahgre river . . . . .	April 15, 1884	3	9	777.73	42
The N. O. K. Lamb Ditch . . . . .	Spring creek . . . . .	May 20, 1884	3.53	3.53	780.73	43
The Baldy Ditch . . . . .	East Fork of Dry creek . . . . .	June 20, 1884	30	30	784.26	44
The Delta Chief Ditch . . . . .	Uncompahgre river . . . . .	Aug. 24, 1884	21	21	814.26	45
The Silver Springs Ditch . . . . .	Uncompahgre river . . . . .	Sept. 23, 1884	7	7	835.26	46
The Logan Ditch . . . . .	Uncompahgre river . . . . .	Sept. 24, 1884	15	15	842.26	47
The Shavano Valley Ditch . . . . .	Spring creek . . . . .	Nov. 21, 1884	7.81	7.81	857.26	48



## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH.	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each reservoir	Cubic feet previously appropriated in district	Order of priority in district
The Uncompahgre Ditch . . . . .	Cedar creek . . . . .	Dec. 13, 1884	44.10	. . . . .	865.07	49
The Malloy Ditch . . . . .	Uncompahgre river . . . . .	Feb. 1, 1885	3	. . . . .	909.17	50
The Heath Ditch . . . . .	Spring creek . . . . .	Feb. 21, 1885	2	. . . . .	912.17	51
The Cedar Creek Ditch . . . . .	Cedar creek . . . . .	Feb. 24, 1885	9.86	. . . . .	914.17	52
The Chipeta-Beaudery Ditch, first enlargement . . . . .	Uncompahgre river . . . . .	Mar. 8, 1885	6	15	924.03	53
The Reservation Ditch . . . . .	Uncompahgre river . . . . .	Mar. 20, 1885	15	. . . . .	939.03	54
The Stiteler Ditch, first enlargement . . . . .	Uncompahgre river . . . . .	Mar. 31, 1885	5.32	7.37	945.03	55
The Uncompahgre Ditch, additional appropriation . . . . .	Uncompahgre river . . . . .	Mar. 31, 1885	50	250	950.35	56
The Uncompahgre & Cedar Creek Valley Ditch . . . . .	Uncompahgre river . . . . .	April 1, 1885	25	. . . . .	1,000.35	57
The Fendall Ditch . . . . .	Cedar creek . . . . .	April 6, 1885	2.08	. . . . .	1,025.35	58
The Colorow Ditch . . . . .	Uncompahgre river . . . . .	July 31, 1885	24.64	. . . . .	1,027.43	59
The Wahl Ditch . . . . .	Cedar creek . . . . .	Feb. 1, 1886	4.16	. . . . .	1,052.07	60
The Midland Ditch . . . . .	Uncompahgre river . . . . .	Mar. 20, 1886	27.95	. . . . .	1,056.23	61
The Ironstone Ditch, first enlargement . . . . .	Uncompahgre river . . . . .	Mar. 31, 1886	76	113.50	1,084.18	62
The Wahl & Dahl Ditch . . . . .	Cedar creek . . . . .	April 1, 1886	4.79	. . . . .	1,160.18	63

The Freeman Ditch . . . . .	Pelton gulch . . . . .	April 15, 1886	.99	. . . . .	1,164.97	64
The T. J. T. Ditch . . . . .	Sheep Ranch creek . . . . .	May 24, 1886	30	. . . . .	1,165.96	65
The Geo. B. Jones & North Mesa Ditch, first enlargement . . . . .	Uncompahgre river . . . . .	July 12, 1886	33.33	40.33	1,195.96	66
The Selig Ditch, first enlargement . . . . .	Uncompahgre river . . . . .	Feb. 7, 1888	58.10	72.60	1,229.29	67
The Platt Ditch . . . . .	Uncompahgre river . . . . .	Mar. 12, 1888	2.08	. . . . .	1,287.36	68
Total in district . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1,289.47	



• *Water District No. 42*—F. W. Halbauer, Commissioner; residence, Grand Junction.

For 1889, Mr. Halbauer reports being called out April 17, that he served, individually, thirty-nine days, and by assistant, eight days, the last day of service being September 17; that there was a great scarcity of water on Kannah creeks, the only streams adjudicated, but that he got along very satisfactorily.

For 1890, the Commissioner was called out June 26. Rating flumes had been generally constructed and rated with satisfactory results. He reports a large reservoir, constructed at the head of Kannah creek, but owing to defective work in the dam, it washed out, in the early spring.

No statistical statement is furnished for the season of 1890, the Commissioner assigning as a reason therefor, that the County Commissioners requested he should not incur the expense.

## COMMISSIONER'S REPORT, A. D. 1889.

DIVISION No. 5—DISTRICT No. 42—

NAME OF DITCH	Length thereof in miles.	Number of days water was carried therein.	Average amount of water carried during season of 1889 in cubic feet per second of time.	Number of acres that can be irrigated therefrom.	Number of acres of alfalfa irrigated therefrom.	Number of acres of seeded grasses other than alfalfa irrigated therefrom.	Number of acres of natural grasses irrigated therefrom.	Number of acres of other crops irrigated therefrom.	Number of acres irrigated from seepage.	Total number of acres irrigated in district.
The William Ponsford Ditch . . . . .	.80	...	.50	25	4	...	...	6	...	...
The Kannah Creek Extension Ditch. . .	6.40	...	5	800	46	...	...	60	...	...
The Smith Irrigating Ditch . . . . .	5.50	...	1.75	640	30	...	...	50	...	...
The North-western Ditch . . . . .	1.60	...	2	230	70	...	...	48	...	...
The Brown & Campion Ditch . . . . .	2.75	...	4.75	1,500	219	...	...	301	...	...
The Sullivan Ditch . . . . .	1.75	...	1	230	22	...	...	19	...	...
The Washburn & Downing Ditch . . .	.90	...	.60	200	20	7	...	17	...	...
The Bales, Williams & Morrison Ditch .	1.25	...	.50	130	7	...	...	13	...	...
The Juniata Ditch . . . . .	5.75	...	3.25	1,120	34	...	...	75	...	...
The Bolen Ditch . . . . .	.50	...	...	...	...	...	...	...	...	...
The Heutschel Ditch. . . . .	.80	...	.50	40	5	10	5	10	...	...
The Segar & Bedford Ditch. . . . .	4.75	...	1.25	320	6	...	...	24	...	...
The Bauer Ditch . . . . .	.90	...	.50	100	4	...	...	11	...	...

The Tenderfoot Ditch . . . . .	4	. . . . .	. . . . .	320	. . . . .	. . . . .	100	25	. . . . .
The Dunlap Ditch . . . . .	.25	. . . . .	. . . . .	6	. . . . .	. . . . .	. . . . .	2	. . . . .
The Jones Ditch . . . . .	2	. . . . .	. . . . .	280	. . . . .	. . . . .	80	5	. . . . .
The Harxhurst Ditch . . . . .	1.50	. . . . .	. . . . .	250	. . . . .	80	25	50	. . . . .
The Glen Ditch . . . . .	.35	. . . . .	. . . . .	30	. . . . .	. . . . .	. . . . .	20	. . . . .
The Cook Ditch . . . . .	2	. . . . .	. . . . .	160	. . . . .	10	5	20	. . . . .
The Berthoff & Coakley Ditch . . . . .	1	. . . . .	. . . . .	35	. . . . .	5	5	15	. . . . .
The Atkinson Ditch . . . . .	. . . . .	. . . . .	. . . . .	50	. . . . .	8	10	20	. . . . .
The Glenpon Plateau Creek Ditch . . . . .	.65	. . . . .	. . . . .	32	. . . . .	5	. . . . .	25	. . . . .
The Coakley & Kiggins Ditch . . . . .	.25	. . . . .	. . . . .	385	. . . . .	. . . . .	. . . . .	30	. . . . .
The Newmark Ditch . . . . .	. . . . .	. . . . .	. . . . .	16	. . . . .	5	. . . . .	20	. . . . .
The Wild Cat Ditch . . . . .	.50	. . . . .	. . . . .	995-95	. . . . .	35	. . . . .	195	. . . . .
The Silver Gauge Ditch . . . . .	.35	. . . . .	. . . . .	985	. . . . .	40	20	100	. . . . .
The Tens Ditch . . . . .	2	. . . . .	. . . . .	242	. . . . .	35	8	-65	. . . . .
The Palmer Ditch . . . . .	1.50	. . . . .	. . . . .	633	. . . . .	20	5	100	. . . . .
The Atkinson Ditch . . . . .	.25	. . . . .	. . . . .	16	. . . . .	2	. . . . .	10	. . . . .
The Berthoff & Updyke Ditch . . . . .	1.50	. . . . .	. . . . .	1,085	. . . . .	50	20	250	. . . . .
The McKee Ditch . . . . .	.30	. . . . .	. . . . .	130	. . . . .	5	4	20	. . . . .
The Rockwell & Needles Ditch . . . . .	.75	. . . . .	. . . . .	220	. . . . .	20	15	20	. . . . .
The Dunlap Ditch . . . . .	1.75	. . . . .	. . . . .	230	. . . . .	15	10	20	. . . . .
The Rockwell Ditch . . . . .	.75	. . . . .	. . . . .	55	. . . . .	5	. . . . .	. . . . .	. . . . .
The Grove Creek Ditch . . . . .	2	. . . . .	. . . . .	120	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .



## COMMISSIONER'S REPORT, A. D. 1889—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1889 in cubic feet per second	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Mormon Mesa Ditch . . . . .	4.50	. . .	. . .	1,279	10	. . .	25	100	. . .	. . .
The Pioneer of Plateau Ditch . . . . .	.37	. . .	. . .	350	50	. . .	60	100	. . .	. . .
The Bull Creek Ditch . . . . .	2	. . .	. . .	428	100	. . .	. . .	200	. . .	. . .
The Hall Ditch . . . . .	1.25	. . .	. . .	280	5	. . .	. . .	40	. . .	. . .
The Snipes Ditch . . . . .	.75	. . .	. . .	40	10	. . .	. . .	10	. . .	. . .
The Davenport Ditch . . . . .	2.50	. . .	. . .	470	5	. . .	. . .	20	. . .	. . .
The Pioneer of Plateau Ditch, enlargement . . . . .	3	. . .	. . .	140	10	. . .	. . .	20	. . .	. . .
The Shotwell Ditch . . . . .	3	. . .	. . .	160	8	. . .	5	12	. . .	. . .
The Mason & Eddy Ditch . . . . .	1.50	. . .	. . .	320	30	. . .	6	95	. . .	. . .
The Independent Ditch . . . . .	4.50	. . .	. . .	460	20	. . .	. . .	75	. . .	. . .
The Mesa Creek Ditch . . . . .	5	. . .	. . .	3,190	160	. . .	30	185	. . .	. . .
The West Side Ditch . . . . .	2	. . .	. . .	729	95	. . .	. . .	150	. . .	. . .
The Arkansas Ditch . . . . .	5	. . .	. . .	800	40	. . .	. . .	100	. . .	. . .
The Snider Ditch . . . . .	1	. . .	. . .	100	5	. . .	. . .	15	. . .	. . .

The Cook Ditch, enlargement and extension	1	230	10	1	1	50
The Johnson and Stewart Ditch . . .	1.50	280	25	1	1	50
The Coakley and Kiggins Ditch, from Big creek . . .	2.50	140		1	1	50
The Oakland Ditch . . .	.50	140		1	1	25
The Parkison Ditch . . .	1.16	130	5	1	1	40
The Fitzpatrick Ditch, from Grove creek . . .	2.50	160	10	1	1	45
The Blackburn, Dunlap and Clark Ditch . . .	2.44	310	10	1	1	60
The King Ditch, from Mesa creek . . .	5	640	5	1	1	40
The Kanago and Roberts Ditch . . .	5	320	5	1	1	25
The Alwill Ditch, from Coon creek . . .	2	320	5	1	1	40
The Norman Mesa Ditch, enlargement . . .	3.33	140		1	1	
The Gulch Ditch . . .		80		1	1	
The Ewer Ditch . . .	.60	30	8	1	1	
The Williams Ditch . . .	2.50	160	20	1	1	25
The River View Ditch . . .	4	260		1	1	2
The Orchard Mesa Ditch . . .	19	440		1	1	
The Brendon Ditch . . .	6	90	10	1	1	15
The Grape Vine Ditch . . .	1	140	5	1	1	5
The Rapid Creek Ditch . . .	2.50	400	5	1	1	10
The Grove Creek Ditch No. 1, enlargement of . . .	2	340	12	1	1	25
The Bertholf, Lanhau and Updike Ditch, enlargement of . . .	2	200	5	1	1	20
The Ciquita Ditch . . .	2	400		1	1	

## COMMISSIONER'S REPORT, A. D. 1889—Concluded.

NAME OF DITCH OR CANAL	Length thereof in miles	Number of days water was car- ried therein	Average amount of water carried during season of 1889 in cubic feet per second of time	Number of acres that can be irri- gated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated there- from	Number of acres of natural grasses irrigated there- from	Number of acres of other crops irri- gated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in dis- trict
The Pioneer of White Water Ditch . .	. . .	. . .	. . .	200	6	. . .	8	. . .	. . .	. . .
The Anderson Ditch . . . . .	1	. . .	. . .	40	2	. . .	. . .	5	. . .	. . .
The Unawep Ditch . . . . .	1	. . .	. . .	40	. . .	. . .	8	2	. . .	. . .
The Willow Creek Ditch . . . . .	2	. . .	. . .	160	5	. . .	. . .	. . .	. . .	. . .
• The Crawford Creek Ditch . . . . .	.5	. . .	. . .	200	. . .	. . .	. . .	. . .	. . .	. . .
The Arnoldson Ditch . . . . .	.25	. . .	. . .	60	. . .	. . .	. . .	. . .	. . .	. . .
The East Creek Ditch . . . . .	.50	. . .	. . .	140	10	. . .	. . .	30	. . .	. . .
The Upper Salt Wash Ditch . . . . .	2.50	. . .	. . .	145	5	. . .	. . .	25	. . .	. . .
The Loba Ditch, No. 1 . . . . .	.08	. . .	. . .	6	. . .	. . .	5	. . .	. . .	. . .
The Loba Ditch, No. 2 . . . . .	.09	. . .	. . .	20	. . .	. . .	4	. . .	. . .	. . .
The Loba Ditch, No. 3 . . . . .	. . .	. . .	. . .	10	. . .	. . .	. . .	. . .	. . .	. . .
The Loba Ditch, No. 4 . . . . .	.10	. . .	. . .	10	. . .	. . .	. . .	. . .	. . .	. . .
The Murray Ditch . . . . .	.25	. . .	. . .	120	5	. . .	. . .	10	. . .	. . .
The Grand Valley Canal System . . .	65	. . .	. . .	30,000	750	. . .	. . .	8,900	. . .	. . .
Totals in district . . . . .	226.32	. . .	. . .	57,067	2,278	17	467	12,267	. . .	15,029

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 42, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL.	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Crawford Irrigating Ditch . . . . .	Rapid creek . . . . .	Dec. 15, 1888	Nov. 29, 1888	5.76	George A. Crawford
The Lanham, Bertholf and Updyke Ditch, enlargement of . . . . .	Big creek . . . . .	Dec. 17, 1888	Dec. 3, 1888	4	David E. Chesser
The Grand Mesa Reservoir's Ditch . . . . .	Reservoirs . . . . .	Jan. 5, 1889	Sept. 12, 1888	Not given	The Grand Mesa Reservoir Company
The Thompson-Edgerton Ditch . . . . .	{ S. F.'s N. Thompson creek . . . . . }	Feb. 18, 1889	May 16, 1888	29.20	{ The Thompson Irrigation, Land and Water Supply Company
The Kiggins & Goyn Ditch . . . . .	Big creek . . . . .	April 5, 1889	Mar. 23, 1887	9	Link Kiggins <i>et al</i>
The enlargement of same . . . . .	Big creek . . . . .	July 31, 1889	July 27, 1889	12	Samuel M. Burwell
The Asbury Ditch . . . . .	Grand river . . . . .	Sept. 28, 1889	June 21, 1889	2	G. L. Asbury
The Coy Ditch . . . . .	Coon creek . . . . .	Sept. 28, 1889	May, 1886	2	Engene A. Coy
The Fonda Ditch . . . . .	Reeder Reservoir . . . . .	Sept. 28, 1889	May 1, 1889	3	H. B. Fonda
The Feeder Ditch to Harris Reservoir . . . . .	Reservoir Ditch . . . . .	Sept. 28, 1889	June 28, 1889	1	William Harris
The Hoosier Ditch . . . . .	Plateau creek . . . . .	Sept. 28, 1889	Nov. 27, 1887	18	John Carmichael <i>et al</i>
The Lapham Irrigating Ditch . . . . .	Little Salt creek . . . . .	Sept. 28, 1889	Mar. 20, 1889	6	Harry Timmons
The Last Time Ditch . . . . .	Plateau creek . . . . .	Sept. 28, 1889	Aug. 16, 1889	2.88	William Wigglesworth
The Layton Irrigating Ditch . . . . .	Waste waters . . . . .	Sept. 28, 1889	Mar. 1, 1886	2	James A. Layton
The Orchard Mesa Power Canal . . . . .	Grand river . . . . .	Sept. 28, 1889	Mar. 6, 1889	110.70	George P. and J. H. Smith

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Anderson-Davenport Irrigating Ditch, enlargement of . . . . .	Cottonwood creek . . . . .	Oct. 14, 1889	Aug. 3, 1889	11.14	Lars C. Arnoldson
The Blackman, Dunlap and Clark Irrigating Ditch, enlargement of . . . . .	Plateau creek . . . . .	Nov. 11, 1889	Oct. 15, 1889	10	Samuel G. Stevens
The Fruita Ditch . . . . .	Waste waters . . . . .	Jan. 9, 1890	April 15, 1888	2	Ann E. Lane
The Grand Junction Canal . . . . .	Grand river . . . . .	Feb. 8, 1890	Nov. 14, 1889	4,895	Frank C. Kendrick
The Hannah Ditch . . . . .	Big creek . . . . .	Mar. 21, 1890	Aug., 1883	2.49	Charley T. Jones
The Park View and Pioneer Plateau Ditch, enlargement of . . . . .	Cottonwood and Bull creeks. . . . .	Mar. 21, 1890	Sept. 5, 1889	4	Samuel Mosher
The Rose Point Power Irrigating Canal . . . . .	Grand river . . . . .	Mar. 21, 1890	Oct. 3, 1889	1,000	Charles N. Cox
The Feeder Ditch to Reeder Reservoir . . . . .	{ N. fork of Kan- nah creek. . . . . }	Mar. 21, 1890	Dec. 18, 1889	Not given	John D. Reeder
The Harding & Simerl Ditch enlargement of . . . . .	{ Cache creek. . . . . }	April 26, 1890	Nov. 1, 1886	6	Dempsey E. Harding
The Dunlap Ditch, enlargement of . . . . .	{ N. fork Buzzard creek. . . . . }	May 15, 1890	Oct. 10, 1889	9.44	A. H. Berthoff
The Independent High Line Ditch. . . . .	Cottonwood creek . . . . .	May 15, 1890	July 24, 1889	3	Lucinda H. Dame
The Mormon Mesa Ditch, enlargement of, No. 2 . . . . .	Cottonwood creek . . . . .	May 15, 1890	April 14, 1890	27.44	Deloss M. Webb
The Mount Lincoln Ditch . . . . .	Grand river . . . . .	May 19, 1890	Mar. 1, 1890	35	F. M. Burger
The Park View Ditch, enlargement of . . . . .	Cottonwood creek . . . . .	June 26, 1890	Feb. 24, 1890	6	Barnett Colclasure
The Gunderson Ditch . . . . .	Cottonwood creek . . . . .	June 26, 1890	Mar. 21, 1890	6	N. P. Cox
The Feeder Ditch to Juniata Reservoir. . . . .	Buzzard creek . . . . .	June 26, 1890	Sept. 1, 1889	12	John and Ole Gunderson
The Indian Creek Ditch . . . . .	Juniata ditch. . . . .	June 26, 1890	May 2, 1890	75	S. L. Purdy et al
The W. E. Smalley Ditch. . . . .	Indian creek . . . . .	June 26, 1890	Oct. 20, 1889	3	L. N. and W. L. Farmer
The Slocumb Ditch . . . . .	Dunlap creek . . . . .	June 26, 1890	Mar. 25, 1890	75	W. H. Smalley
The F. Gross Ditch . . . . .	Adobe creek . . . . .	Aug. 7, 1890	July 1, 1890	3	Edwin M. Slocomb
The Shindlecker Ditch. . . . .	Little Salt Wash . . . . .	Oct. 7, 1890	Mar. 1, 1890	15	Frank Gross
The River View Ditch, extension and enlargement . . . . .	Shindlecker cr'k. White Water creek. . . . .	Nov. 10, 1890	June 15, 1890	6	Charles H. Gray & Enos T. Hotchkiss
		Nov. 10, 1890	Oct. 23, 1890	5	Jas. R. Snyder and G. A. Bird



# STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 12, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEERS' OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Grand Mesa Reservoir No. 1 . . .	General drainage	Not stated . . . .	Jan. 5, 1889	Sept. 12, 1888	{ 27,442,800 4,356,000 5,662,800 6,969,600 6,098,400 }	The Grand Mesa Reservoir Co.
The Grand Mesa Reservoir No. 2 . . .						
The Grand Mesa Reservoir No. 3 . . .						
The Grand Mesa Reservoir No. 4 . . .						
The Grand Mesa Reservoir No. 5 . . .						
The Harris Reservoir . . . . .	Reservoir Ditch .	Reeder . . . . .	Sept. 28, 1889	June 28, 1889	2,475,000	William Harris
The Reeder Reservoir . . . . .	Kannah creek . .	Feeder . . . . .	Mar. 21, 1890	Dec. 18, 1889	7,830,000	John D. Reeder
The Juniata Reservoir . . . . .	Juniata Ditch . .	Feeder . . . . .	June 26, 1890	May 2, 1890	8,682,608	{ S. L. Purdy, J. M. Walker and E. Purdy }
The Indian Creek Reservoir . . . . .	Indian creek . .	Indian creek . .	June 26, 1890	Oct. 20, 1889	Not given	L. N. & W. L. Farnum
The River View Ditch Reservoir . . .	White Water crk.	River View . .	Nov. 10, 1890	Oct. 23, 1890	6,000,000	Jas. R. Snyder & G. A. Bird



## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 42, PREPARED BY THE SUPERINTENDENT OF IRRIGATION OF WATER DIVISION NO. 5, FROM THE CERTIFIED COPY OF THE DECREE GOVERNING APPROPRIATIONS OF WATER IN SAID DISTRICT, FURNISHED HIM BY THE CLERK OF THE DISTRICT COURT.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated on stream	Order of priority
The Wm. J. Pousford Ditch . . . . .	Kannah creek . . . . .	Dec., 1881	.60	.60	. . . . .	1
The Kannah Creek Extension Ditch . . . . .		Nov. 1, 1884	15.60	15.60	.60	2
The Smith Irrigating Ditch . . . . .		Aug. 11, 1885	1.30	. . . . .	16.20	3
The Northwestern Ditch . . . . .		Aug. 11, 1885	4	. . . . .	17.50	4
The Brown & Campion Ditch . . . . .		Nov. 4, 1885	8.60	. . . . .	21.50	5
The Sullivan Ditch . . . . .		Dec. 3, 1885	3.57	. . . . .	30.10	6
The Smith Irrigating Ditch, second appropriation . . . . .		Mar. 26, 1886	19.60	20.90	33.67	7
The Brown & Campion Ditch, second appropriation . . . . .		Dec. 16, 1886	22	30.60	53.27	8
The Washburn & Downing Ditch . . . . .		Jan. 21, 1888	2.77	. . . . .	75.27	9
The Bates, Williamson & Morrison Ditch . . . . .		April, 1882	2.70	. . . . .	78.04	10
The Junieta Ditch . . . . .		Jan. 7, 1884	21.25	. . . . .	80.74	11
Total appropriation on Kannah creek . . . . .					101.99	

The Bolen Ditch No. 2 . . . . .	Mar. 6, 1882	.90	. . . . .	. . . . .	1
The Henschel Ditch . . . . .	May 1, 1883	.95	. . . . .	. . . . .	2
The Seegar & Bedford Ditch . . . . .	May 1, 1885	5.76	. . . . .	1.85	3
The Bolen Ditch No. 1 . . . . .	Mar. 5, 1882	1.40	. . . . .	7.61	4
The Bauer Ditch . . . . .	Feb. 15, 1883	1.96	. . . . .	9.01	5
The Seegar & Bedford Ditch, second appropriation . . . . .	Sept. 21, 1885	Not given	. . . . .	10.97	6
Total appropriation on North Fork of Kennah creek . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . .
The Palmer Ditch . . . . .	. . . . .	11.23	. . . . .	. . . . .	1
The Tims Ditch . . . . .	. . . . .	4.32	. . . . .	11.23	2
The Wild Cat Ditch . . . . .	. . . . .	17.68	. . . . .	15.55	3
The Silver Gauge Ditch . . . . .	. . . . .	17.48	. . . . .	33.23	4
The Burkhalf, Sauhan & Updike Ditch . . . . .	. . . . .	19.26	. . . . .	50.71	5
The Coakly & Kiggins Ditch . . . . .	. . . . .	6.82	. . . . .	69.97	6
The Johnson & Stewart Ditch . . . . .	. . . . .	4.97	. . . . .	76.79	7
The Enlarged Coakly & Kiggins Ditch . . . . .	. . . . .	2.49	. . . . .	81.76	8
The Enlarged Burkhalf, Sauhan & Updike Ditch . . . . .	. . . . .	2.49	. . . . .	84.25	9
The Hannah Ditch . . . . .	. . . . .	2.52	. . . . .	86.74	10
Total appropriation on Big creek . . . . .	. . . . .	. . . . .	. . . . .	89.26	. . .
The Dunlap Ditch No. 1 . . . . .	. . . . .	.11	. . . . .	. . . . .	1
The Dunlap Ditch No. 1 . . . . .	. . . . .	.20	. . . . .	.11	2
The Glenn Ditch . . . . .	. . . . .	.53	. . . . .	.42	3
The Atkinson Ditch . . . . .	. . . . .	.89	. . . . .	.95	4
Plateau creek . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . .

## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated on stream	Order of priority on stream
The Blackman, Dunlak & Cook Ditch . . . . .	Plateau creek . . . . .	. . . . .	5.50	. . . . .	1.84	5
The Perkins Ditch . . . . .			2.31	. . . . .	7.34	6
The Atkinson Ditch, second appropriation . . . . .			.29	1.18	9.65	7
The Blackman D. & C. Ditch, second appropriation . . . . .			1.44	6.94	9.93	8
Total appropriation on Plateau Creek . . . . .			. . . . .	. . . . .	11.37	
The Rockwell Ditch . . . . .	Grove creek . . . . .	. . . . .	.98	. . . . .	. . . . .	1
The Fitzpatrick Ditch . . . . .			2.85	. . . . .	.98	2
The Burkhalf & Coakly Ditch . . . . .			.62	. . . . .	3.83	3
The Grove Creek Ditch Co.'s Ditch No. 1 . . . . .			2.13	. . . . .	4.45	4
The Rockwell & Needles Ditch . . . . .			3.91	. . . . .	6.58	5
The Murray Ditch . . . . .	. . . . .	. . . . .	2.13	. . . . .	10.49	6
The G. C. Ditch Co.'s Ditch, second appropriation . . . . .			6.40	8.53	12.62	7
Total appropriation on Grove Creek . . . . .			. . . . .	. . . . .	19.02	
The Mason & Eddy Ditch . . . . .	. . . . .	. . . . .	5.70	. . . . .	. . . . .	1
The Mesa Creek Ditch . . . . .			16.62	. . . . .	5.70	2

## STATE ENGINEER.

471

The West Side Ditch . . . . .	4.97	22.32	3
The Independent Ditch . . . . .	8.17	21.29	4
The Arkansas Ditch . . . . .	14.20	35.46	5
The King Ditch . . . . .	11.40	49.66	6
Total appropriation on Mesa Creek . . . . .		61.06	1
The Jones Ditch . . . . .	4.97		2
The McKee Ditch . . . . .	2.31	4.97	3
The Cook Ditch . . . . .	2.85	7.82	4
The Newman Ditch . . . . .	.28	10.67	5
The Cook Ditch, second appropriation . . . . .	4.08	10.95	6
The Snider Ditch . . . . .	1.78	15.03	7
Total appropriation on Kimball Creek . . . . .		16.81	1
The Snipes Ditch . . . . .	2.49		2
The Hall Ditch . . . . .	4.97	2.49	3
The Mormon Mesa Ditch . . . . .	22.70	7.46	4
The Davenport Ditch . . . . .	8.50	30.16	5
The Park View Ditch . . . . .	2.13	38.66	6
The Mormon Mesa Ditch, second appropriation . . . . .	2.49	40.79	7
The Shotwell Ditch . . . . .	2.85	43.28	1
Total appropriation on Cottonwood Creek . . . . .		46.13	2
The Fwers Ditch . . . . .	.53		
The Brandon Ditch . . . . .	1.60	.53	
Total appropriation on White Water creek . . . . .			

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH OR CANAL	Stream from which water is taken	Date of appropriation	Cubic feet of water per second decreed to each priority	Summation of decrees to each ditch or canal	Cubic feet per second previously appropriated on stream	Order of priority on stream
The Pioneer of White Water Ditch. . . . .	White Water creek.	. . . . .	3.55	. . . . .	2.16	3
The Orchard Mesa Ditch. . . . .			7.81	. . . . .	5.71	4
The River View Ditch. . . . .			4.62	. . . . .	13.52	5
Total appropriation on White Water Creek . . . . .			. . . . .	. . . . .	18.14	
The Haunhurst Ditch. . . . .	Buzzard creek. . . . .	. . . . .	4.44	. . . . .	. . . . .	1
The Dunlap Ditch. . . . .			5.68	. . . . .	4.44	2
Total appropriation on Buzzard Creek . . . . .			. . . . .	. . . . .	10.12	
The Coon Creek Ditch . . . . .	Coon creek . . . . .	. . . . .	.72	. . . . .	. . . . .	1
The Atwell Ditch . . . . .			5.70	. . . . .	.72	2
Total appropriation for Coon Creek. . . . .			. . . . .	. . . . .	6.42	
The Chiquita Dolores Ditch . . . . .	Chiquita Dolores creek. . . . .	. . . . .	14.20	. . . . .	. . . . .	1
The Anderson Ditch . . . . .			.72	. . . . .	. . . . .	1
The Unawweep Ditch. . . . .			.71	. . . . .	.72	2
The East Creek Ditch. . . . .	East creek . . . . .	. . . . .	3.60	. . . . .	1.43	3
Total appropriation from East Creek. . . . .			. . . . .	. . . . .	5.03	

The Loba Ditch No. 1.			.11	1
The Loba Ditch No. 2.	Loba creek, east fork.		.36	2
The Loba Ditch No. 3.			.18	3
Total appropriation from Loba Creek, East Fork			.65	
The Loba Ditch No. 4.	Loba creek.		.18	1
The Oakland Ditch . . . . .	Lemnicx creek.		2.49	1
The Kanaga & Roberts Ditch.	Beaver creek.		5.70	1
The Bull Creek Ditch . . . . .			7.60	1
The Pioneer of Plateau Ditch. . . . .			6.21	2
The Stuart Ditch . . . . .	Bull creek.		1.07	3
The Pioneer of Plateau Ditch, second appropriation. . . . .			2.49	4
Total appropriation from Bull Creek			17.37	
The Grape Vine Ditch . . . . .			1.44	1
The Rapid Creek Ditch . . . . .	Rapid creek.		7.10	2
The Crawford Ditch . . . . .			3.55	3
Total appropriation from Rapid Creek			12.09	
The Tender-foot Ditch. . . . .	Tender-foot creek.		5.70	1
The Willow Creek Ditch . . . . .	Willow creek.		2.85	1
The Williams Irrigating Ditch . . . . .			2.85	1
The Upper Salt Wash Ditch . . . . .	Big Salt Wash creek.		2.57	2
Total appropriation from Big Salt Wash Creek.			5.42	



*Water District No. 45*—James Tallmadge, Commissioner for 1889; residence, New Castle, Colo. Peter Churchfield, for 1890, appointed July 21, 1890; residence, Crested Butte.

Water District No. 45 consists of all lands situated on the south side of Grand river, and irrigated from ditches or canals taking water from the Grand river and its tributaries between the mouth of Roaring Fork river and the north line of Mesa county.

For the year 1889, Mr. Tallmadge makes a statistical report and a concise statement of difficulties met with in his district, as follows:

HON. J. P. MAXWELL,

NEW CASTLE; Dec. 11, 1889.

*State Engineer.*

SIR:—Herewith I transmit statement of ditches and amounts of cultivated land on the forms provided for that purpose.

It will appear that the 67 ditches within the district have a total length of 86 $\frac{3}{4}$  miles.

I have noted in this report that only 4 ditches of the 67 enumerated draw water from the Grand river (two of which are not adjudicated) all others are dependent upon the small tributaries from which 17,290 feet per minute of time has been drained. During the season of 1889 only 6,360 feet per minute of time could be supplied, and that average amount only for one irrigation in many instances. This marked insufficiency of water supply is the origin of never-ending discord among claimants for water during the irrigating season, and complications are constantly arising not defined by any statutory provisions or by any instructions emanating or that can emanate from your department, owing to their complex and intricate character.

The position of the Commissioner is, therefore, one wherein great forbearance, acute judgment and the finest sense of equity and justice may all fail to afford satisfaction. Instances have occurred in this district where priorities of right to the use of water are held at the lower end of the creek. All the water the creek affords fails to supply even a small portion of the amount decreed owing to the sinking away or wasting of the water in transit. The amount of water thus wasted in the bed of the creek was sufficient to accomplish a beneficial purpose if given to ditches at points higher up. In such a case, I have presumed to give the water to ditches where good could be

accomplished, believing the act to fall within the meaning of the law, or if not, at least within the range of common sense.

On Garfield creek worse conditions exist, as compared with those enumerated above. The prior right is held at the upper ditch on the creek. The second right in priority is held at the lower ditch of all.

Years of irrigation from the upper or prior ditch has caused seeps or springs to form, which supplies the lower portion of the creek with a cubic foot of water per second of time, after the water ceases to flow in the creek, above the head-gate of the prior ditch.

An intervening appropriator claims this water does not belong to the lower ditch or second priority, that in the natural course of things it all would have disappeared and that he constructed his ditch diverting and appropriating to the uses of his ditch the identical water arising from the springs. Without venturing any opinion relative to this controversy, I will express the belief that such matters should be subject to final decision in your department and litigation thereby estopped.

I will again call your attention to a question as to the boundaries of this District (No. 45) and District No. 42.

Wallace creek discharges its waters into the Grand river within the limits of Garfield county, and within the boundaries of Water District No. 45. The prior appropriator of water from that stream claims to be, and is in Mesa county, and has adjudicated his water right in District No. 42, and the act creating District No. 42 clearly implies that he is within that district. A later appropriation was made from that creek by the "Homestake" Ditch, which is within the county of Garfield and has been adjudicated in this district. There is not an amount of water sufficient to supply both appropriations in Wallace creek, hence a conflict.

Regretting to have wearied you with so long a letter upon matters of inferior importance, I will in conclusion add that the water of the Grand river flows by Water District No. 45, and in supply sufficient probably to irrigate 1,000,000 acres of land.

The great expense of a canal from the Grand river to supply the 100,000 acres of arable land in this district will delay its construction possibly for all time, certainly until the State sees the great importance of reclaiming a fine valley adapted to the growth of every product common to Colorado, and in fruit possibilities exceeding, probably, any other portion of the State. Colorado's golden age will dawn when the water of the Grand river is utilized upon the lands of this State.

Yours very truly,

JAMES TALLMADGE,

*Commissioner.*

Mr. Churchfield reports for 1890, twenty days' service on Battlement, Cache and Beaver creeks; that no loss of crops or dissatisfaction occurred. He recommends the enactment of a law whereby the Commissioner will have supervision over the distribution of water from ditches to consumers.

# COMMISSIONER'S REPORT, A. D. 1889.

STATE ENGINEER

487

DIVISION No. 5—DISTRICT No. 45.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during time per second of time in cubic feet	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Murray & Yule Ditch . . . . .	.87½	60	4	500	100	. . . . .	200	60	. . . . .	. . . . .
The Wm Gant Ditch . . . . .	.25	70	1	130	7	. . . . .	40	11	. . . . .	. . . . .
The Moore Ditch . . . . .	.50	90	1	100	4	. . . . .	35	16	. . . . .	. . . . .
The East Divide Ditch . . . . .	.125	65	5	420	45	15	65	25	. . . . .	. . . . .
The Wm. H. Reynolds Ditch . . . . .	.50	65	.25	40	. . . . .	1	. . . . .	10	. . . . .	. . . . .
The Clausen & Byrne Ditch . . . . .	1	90	1	200	16	2	15	60	. . . . .	. . . . .
The Camp Bird Ditch. . . . .	1.50	100	1.50	300	7	. . . . .	75	12	. . . . .	. . . . .
The Clausen Ditch . . . . .	.50	95	1	75	. . . . .	. . . . .	20	30	. . . . .	. . . . .
The Little Nuckells Ditch . . . . .	.25	10	.25	15	. . . . .	. . . . .	. . . . .	2	. . . . .	. . . . .
The Don Ditch . . . . .	1.25	50	1.50	125	20	. . . . .	30	20	. . . . .	. . . . .
The Rusler Ditch. . . . .	1	60	1	100	1	* 10	. . . . .	15	. . . . .	. . . . .
The Clear Creek Ditch . . . . .	.75	50	1	150	18	. . . . .	40	17.50	. . . . .	. . . . .
* The Rising Sun Ditch . . . . .	2.50	100	4	640	25	5	100	68	. . . . .	. . . . .

\* This ditch draws its water from the Grand river.

## COMMISSIONER'S REPORT, A. D. 1889—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during time water was carried there- in, in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated there- from	Number of acres of natural grasses irrigated there- from	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Mann Ditch . . . . .	.75	90	2	600	40	.	90	55	.	.
The Starke Ditch . . . . .	.12½	90	.75	75	1	.	2	30	.	.
The Nuckolls Ditch. . . . .	1	.	{ Not used in 1889 }	.	.	.	.	.	.	.
The Ward & Reynolds Ditch. . . . .	1.50	40	2	300	7	.	.	85	.	.
The Hunter & Gant Ditch . . . . .	.75	100	2	300	27	3	100	57	.	.
The Buffalo Ditch. . . . .	.12½	90	.75	80	1	.	2	20	.	.
The Boulton & Banta Ditch. . . . .	1	90	1	225	27	.	.	42	.	.
The Battlement Ditch. . . . .	1.50	100	2.50	400	58	15	14	55	.	.
The Harding & Sinnerl Ditch . . . . .	1.25	90	1	250	10	5	.	30	.	.
The Huntley Ditch . . . . .	1.50	90	1.50	550	15	4	25	75	.	.
The Tanghinbaugh Ditch . . . . .	2	100	1	700	25	5	.	80	.	.
The Tallmadge & Gibson Ditch . . . . .	4	40	3	710	24	.	85	82	.	.
The J. A. Clark Ditch. . . . .	1	90	1	140	15	.	10	20	.	.
The Homestake Ditch . . . . .	.50	20	1	150	.	.	.	20	.	.

The Porter Ditch . . . . .	8	20	5	1,000	26	. . . . .	. . . . .	148	. . . . .
The Upper Mamm Ditch . . . . .	.50	50	1	300	2	. . . . .	. . . . .	25	. . . . .
The Emanuel Gaut Ditch . . . . .	.75	60	1	150	15	. . . . .	. . . . .	50	. . . . .
The West Divide Ditch . . . . .	2.50	20	3	600	13	. . . . .	. . . . .	5	. . . . .
The Hudson & Sullivan Ditch . . . . .	1.25	60	2	250	12	. . . . .	. . . . .	110	. . . . .
The R. F. Ditch . . . . .	1.25	50	3	750	20	. . . . .	. . . . .	75	. . . . .
The Teepee Ditch . . . . .	.75	40	1	100	4	. . . . .	. . . . .	20	. . . . .
The O'Brien Feeder Ditch . . . . .	2	50	1	200	2	. . . . .	. . . . .	30	. . . . .
The Louis Reynolds Ditch . . . . .	.25	25	.50	25	2	. . . . .	. . . . .	. . . . .	7
The Canary Bird Ditch . . . . .	.25	100	.50	75	. . . . .	. . . . .	. . . . .	. . . . .	5
The Sliding Ditch . . . . .	1	20	1	125	. . . . .	. . . . .	. . . . .	10	. . . . .
The Spring Creek Ditch . . . . .	.75	100	.25	75	. . . . .	. . . . .	. . . . .	. . . . .	5
The Cottonwood Ditch . . . . .	1.50	70	2.50	600	20	. . . . .	. . . . .	75	. . . . .
The Ward, Dow & Taylor Ditch . . . . .	1.25	30	2	400	30	. . . . .	. . . . .	80	. . . . .
The Mocking Bird Ditch . . . . .	1	60	1	150	. . . . .	. . . . .	. . . . .	10	. . . . .
The Young, Mackey & O'Conner Ditch . . . . .	1.75	30	1	300	10	. . . . .	. . . . .	. . . . .	45
The Jay Bird Ditch . . . . .	.75	45	1	300	5	. . . . .	. . . . .	20	. . . . .
The Hewitt & Melburn Ditch . . . . .	1	40	1	325	2	. . . . .	. . . . .	25	. . . . .
The Smith Ditch . . . . .	1	30	1	100	. . . . .	. . . . .	. . . . .	2	. . . . .
The Smith & New Ditch . . . . .	1.50	30	1	225	2	. . . . .	. . . . .	20	. . . . .
The Anderson Ditch . . . . .	.50	25	1	150	2	. . . . .	. . . . .	25	. . . . .
The Musconetcong Ditch . . . . .	1.25	20	1	250	2	. . . . .	. . . . .	. . . . .	30



## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during time water was carried there-in, in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Humming Bird Ditch . . . . .	.50	20	1	140	5	. . . . .	10	15	. . . . .	. . . . .
* The Last Chance Ditch . . . . .	9	100	6	1,000	48	. . . . .	10	120	. . . . .	. . . . .
The Shult Ditch . . . . .	1.50	25	1	175	2	. . . . .	5	15	. . . . .	. . . . .
The Cedar Grove Ditch . . . . .	.75	25	1	150	2	. . . . .	20	5	. . . . .	. . . . .
The Hill Ditch . . . . .	1	20	1	140	1	. . . . .	10	15	. . . . .	. . . . .
The R. & A. G. Anderson Ditch . . . . .	2	20	2	250	5	. . . . .	15	45	. . . . .	. . . . .
The Martin & Kennedy Ditch . . . . .	1	20	2	200	2	. . . . .	. . . . .	35	. . . . .	. . . . .
The O'Brien & Baumgartner Ditch . . . . .	2	30	1.50	250	4	. . . . .	12	25	. . . . .	. . . . .
The Cottonwood Feeder Ditch . . . . .	3	15	2	250	4	. . . . .	12	25	. . . . .	. . . . .
The McDonald Ditch . . . . .	.75	25	1	150	1	. . . . .	5	15	. . . . .	. . . . .
The Ripler Ditch . . . . .	.75	25	1	100	2	. . . . .	20	12	. . . . .	. . . . .
The Goodenough Ditch . . . . .	.25	40	1	75	. . . . .	. . . . .	15	15	. . . . .	. . . . .
The Blue Bird Ditch . . . . .	.75	40	1	100	3	. . . . .	. . . . .	20	. . . . .	. . . . .
The Beaver Creek Ditch . . . . .	.25	15	1	50	. . . . .	. . . . .	. . . . .	10	. . . . .	. . . . .

The Mountain Sheep Ditch . . . . .	.25	15	1	40	. . . . .	. . . . .	20	2	. . . . .
† The Clarkson ( Grand river ) Ditch . .	2	90	2	150	15	. . . . .	10	7	. . . . .
† The Bermda ( Grand river ) Ditch . .	1.50	100	2	150	20	. . . . .	. . . . .	10	. . . . .
† The Tahanae ( Water creek ) Ditch . . .	1.50	90	2	320	25	35	90	15	. . . . .
Totals in District . . . . .	86.875	. . .	106.25	17,315	810	67	1,802	2,106.50	4,791.50

† Not adjudicated.

\* This ditch draws its water from the Grand river.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 45, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Mesa Ditch . . . . .	Springs . . . . .	Feb. 19, 1889	Dec. 14, 1888	17	Augustus C. Smith <i>et al</i>
The Necessity Ditch . . . . .	East Mamam creek	July 5, 1889	April 6, 1889	6	S. L. Lewis
The B-runudy Ditch . . . . .	Grand river . . . . .	July 13, 1889	April 1, 1887	50	Fred Bernudy
The Shutt Reservoir Feeder Ditch	Battlement creek . . . . .	Aug. 19, 1889	Aug. 10, 1889	70	Gleason W. Shutt
The Grandstaff Ditch . . . . .	South Cañon creek	Sept. 5, 1889	May 10, 1885	2	William J. Grandstaff
The Dennis & Barton Ditch . . . . .	Divide creek . . . . .	Mar. 10, 1890	Mar. 10, 1887	5	Lucien N. Drake <i>et al</i>
The Mast Ditch . . . . .	Alkali creek . . . . .	May 9, 1890	Nov. 4, 1890	3.58	Henry Mast and Brothers
The Keno Ditch . . . . .	Alkali creek . . . . .	May 9, 1890	May 5, 1890	10.50	Frank W. Toland <i>et al</i>
The Gilbert McLean Ditch . . . . .	Alkali gulch . . . . .	May 12, 1890	Not given	2.60	Gilbert McLean
The East Divide Ditch, the Gallagher extension of . . . . .	East Divide creek . . . . .	June 21, 1890	Aug. 9, 1882	10	John C. Gallagher
The Probasco Ditch No. 1 . . . . .	West Divide creek . . . . .	Oct. 28, 1890	June 20, 1886	3	Frank Probasco
The Probasco Ditch No. 2 . . . . .	West Divide creek . . . . .	Oct. 28, 1890	Nov. 1, 1887		Frank Probasco
The Probasco Waste Water Ditch	Hall's gulch . . . . .	Oct. 28, 1890		3	Frank Probasco

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No 45, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Gant Reservoir . . . . .	West Mamm creek . . .	On the stream . . . .	May 9, 1889	April 21, 1888	7,500,000	. . . Johnathan Gant <i>et al</i>
The Necessity Reservoir . . . . .	East Mamm creek . . .	Necessity Ditch . . .	July 5, 1889	April 6, 1889	700,000	. . . . . S. L. Lewis
The Shutt Reservoir . . . . .	Battlement creek . . .	Shutt Ditch . . . . .	Aug. 19, 1889	April 10, 1889	3,000,000	. . . . . Gleason W Shutt

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 50, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Pleasant View Ditch . . . . .	Troublesome creek	Dec. 13, 1889	April 5, 1892	9.10	George Serrell
The Side Mountain Ditch . . . . .	Springs . . . . .	Dec. 13, 1889	June 5, 1884	Not given	George Serrell
The Serrell Ditch, enlargement . . . . .	Troublesome creek	Dec. 13, 1889	May 15, 1890	Not given	George Serrell <i>et al</i>

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 51, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL, statement	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commence- ment of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Hammond Ditch No. 2, amended { statement . . . . . }	St. Louis creek . . . . .	April 18, 1889	Aug. 20, 1883	24.50	. . . . . Julius H. Hammond
The Berthoud Pass Canal, E. branch . .	Frazier river . . . . .	Jan. 2, 1890	Oct. 1, 1889	350	. . . . . George H. Church
The Berthoud Pass Canal, W. branch . .	Frazier river . . . . .	Jan. 2, 1890	Oct. 1, 1889	350	. . . . . George H. Church
The Clayton-Smith Ditch . . . . .	Willow creek . . . . .	Oct. 8, 1890	. . . . .	11.25	. . . . . Clayton Smith
The Coffey & McIneary Ditch . . . . .	Grand river . . . . .	Oct. 21, 1890	. . . . .	22.50	. . . . . N. H. Coffey <i>et al</i>
The McIneary Ditch . . . . .	McIneary creek . . . . .	Nov. 5, 1890	June 6, 1890	12.50	. . . . . William E. Kinney



## STATEMENTS CONCERNING DITCHES

IN WATER DISTRICT No. 52, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office.	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Antelope Creek Ditch . . . .	Antelope creek . . .	Feb. 20, 1889	Jan. 20, 1889	5.60	. . . . . A. W. James
The Peter Brunner Ditch . . . .	Box Cañon creek . .	May 27, 1889	April 15, 1889	15.50	. . . . . Peter Brunner
The Layton Irrigating Ditch . . .	Horse creek . . . .	June 4, 1889	May 25, 1889	2.61	. . . . . J. J. Layton
The Osage Ditch . . . . .	Sheephorn creek . .	Aug. 9, 1889	Aug. 15, 1884	5	. . . . . Harvey B. Dice
The Wilmot Ditch . . . . .	Big Cottonwood creek	Aug. 19, 1889	June 1, 1884	7.81	. . . . . Stephen D. Wilmot
The North Piney Ditch . . . . .	Piney river . . . .	April 10, 1890	Oct. 15, 1889	3	. . . . . Zachary T. Freeman
The South Piney Ditch . . . . .	Piney river . . . .	April 10, 1890	Oct. 15, 1889	3	. . . . . Zachary T. Freeman
The Bona Dea Ditch . . . . .	Grand river . . . .	April 14, 1890	Dec. 17, 1889	26.04	. . . . . James H. Myers <i>et al</i>
The Burneson Ditch . . . . .	Burneson creek . . .	April 17, 1890	May, 1888	5	. . . . . Daniel G. Burneson
The South Piney Ditch . . . . .	Piney river . . . .	April 21, 1890	Oct. 15, 1889	3	. . . . . Zachary T. Freeman

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 53, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The S. D. Ditch . . . . .	Egeria creek . . . . .	Dec. 13, 1888	June, 1885	12	Samuel D. Wilson
The Deep Creek Irrigating Ditch . . . . .	Deep creek. . . . .	Jan. 19, 1889	May 29, 1887	10	James Dilts
The S. D. Ditch, enlargement . . . . .	Egeria creek . . . . .	Mar. 8, 1889	Oct. 18, 1888	11.10	Levi L. Newcomer and Frank Groh
The Red Dirt Ditch . . . . .	Red Dirt creek . . . . .	Mar. 29, 1889	Dec. 29, 1888	8.48	M. M. Grimes
The Oak Knoll Ditch . . . . .	Antelope creek. . . . .	April 17, 1889	Sept. 15, 1888	7.60	Alvin Dieter
The Nelson Irrigating Ditch . . . . .	Horse creek . . . . .	April 29, 1889	Mar. 12, 1889	7.81	Edwin H. Nelson
The High Water Ditch . . . . .	S. Fork Egeria creek . . . . .	May 14, 1889	Oct. 18, 1888	7.70	Louis Auserg and Anthony Steiner
The Sease Irrigating Ditch No. 2 . . . . .	Sheep Cañon creek . . . . .	May 25, 1889	Not given	3.91	S. S. Sease
The Frederick Irrigating Ditch . . . . .	Turret creek . . . . .	July 30, 1889	April 15, 1887	5.21	Christian Frederick
The Elkhorn Ditch . . . . .	Sarvis creek . . . . .	Oct. 6, 1889	April, 1886	13.50	Thomas Smith and William J. Armour
The Moody Creek Ditch . . . . .	Watson creek . . . . .	Oct. 7, 1889	Sept. 11, 1889	3	James O. Swinney
The Fix Ditch, extension . . . . .	Sarvis creek . . . . .	Oct. 26, 1889	Aug. 1, 1886	8	Elijah Moody
The Conger Ditch . . . . .	John's creek . . . . .	Nov. 23, 1889	Indefinite	5	James O. Swinney
The Elliott Ditch . . . . .	Rock creek . . . . .	Dec. 11, 1889	April 15, 1887	22.88	John D. Conger et al.

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Groff Ditch . . . . .	Spring creek . . . . .	Jan. 16, 1890	May, 1886	11	. . . . . Nannie I. Elliott
The North Eggeria Ditch . . . . .	N. Fork Eggeria creek	Feb. 19, 1890	April 16, 1885	7	. . . . . John Groff
The Elliott Ditch . . . . .	Rock creek . . . . .	Dec. 11, 1889	May, 1886	11	. . . . . Nannie I. Elliott
The North Eggeria Ditch . . . . .	N. Fork Eggeria creek	Feb. 19, 1890	April, 1886	13.50	. . . . . Thomas Smith and William J. Armour
The John McCluskey Ditch . . . . .	Horse creek . . . . .	April 11, 1890	Mar. 6, 1889	3	. . . . . John McCluskey

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 53, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Nelson Reservoir. . . . .	Horse & Willow c'ks	Nelson Ir. Ditch	April 29, 1889	Mar. 12, 1889	318,655	. . . . . Edwin H. Nelson

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 59, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890,

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Hinkle-Hamilton Irrigating Ditch . . . . . }	Ohio creek . . . . .	Dec. 17, 1888	Dec. 8, 1888	24	. . . . . Jacob R. Hinkle and J. W. Hamilton
The Hamilton Ditch . . . . . }	Ohio creek . . . . .	Dec. 17, 1888	Dec. 8, 1888	5	. . . . . J. W. Hamilton
The High Line Ditch . . . . . }	Little Mill creek . . . . .	Jan. 1, 1889	Dec. 8, 1888	20	. . . . . Allan F. Cunningham and Jonathan McKillip
The Gunnison River-Ohio Creek Irrigating Ditch . . . . . }	Gunnison river . . . . .	May 15, 1889	Mar. 5, 1889	9	. . . . . Robert L. Marshall
The McCraney Ditch . . . . . }	Fisher's gulch . . . . .	June 17, 1889	June 13, 1889	5	. . . . . Thomas McCrauey
The Gunnison Town Ditch . . . . . }	Gunnison river . . . . .	July 10, 1889	April 20, 1889	35	. . . . . The Town of Gunnison
The Lone Pine Ditch . . . . . }	Ohio creek . . . . .	July 27, 1889	July 10, 1889	7.45	. . . . . William Kembreu, Byron Spry, A. J. Seaman
The Mary O. Smith Ditch . . . . . }	Carbon creek . . . . .	Jan. 2, 1890	Oct. 1, 1886	9	. . . . . Mary O. Smith
The Fisher Ditch . . . . . }	Lone Pine ditch . . . . .	April 17, 1890	Nov. 22, 1889	24.41	. . . . . Andrew P. Marston, H. H. Horton, A. B. Matthews
The Roaring Judy Ditch . . . . . }	Roaring Judy gulch . . . . .	May 28, 1890	May 1, 1886	9.04	. . . . . Arthur I. Sims
The Marston Ditch . . . . . }	East river . . . . .	Oct. 2, 1890	June 15, 1880	26.04	. . . . . John P. Marston

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 60, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Robinson Ditch . . . . .	Springs . . . . .	Nov. 15, 1889	Nov. 15, 1886	2.75	. . . . . Mary Robinson
The Robinson Ditch No. 2 . . . . .	No. 3 spring . . . . .	Nov. 15, 1889	April 20, 1886	.42	. . . . . Mary Robinson
The Little Chief Ditch . . . . .	{ Branch of W. Fork } { of Big Bear creek }	Oct. 14, 1890	Aug. 23, 1890	7.50	. . . . . Olaf Nelson and Fred Fortier



## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 60, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Pleasant Valley Reservoir . . . .	Br. of Bear river	Built on stream	Oct. 31, 1890	June 2, 1890	266,666	. . . N. T. Bowman <i>et al</i>

## STATEMENT CONCERNING DITCHES.

IN WATER DISTRICT No. 61, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Albee Channel Ditch . . . . .	Springs, waste water . . . . .	Aug. 8, 1890	Dec. 20, 1885	1,000	. . . . . Charles Albee
The Main Canal No. 1 . . . . .	Dolores river . . . . .	Aug. 27, 1890	Nov. 25, 1885	700	} The Colorado Consolidated Land and Water Company
The Main Canal No. 2 . . . . .	Dolores river . . . . .	Aug. 27, 1890	July 6, 1886	600	

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT NO. 61, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Narraguinnep Reservoir . . . . .	Dolores river . . . . .	Main Canal No. 2	Aug. 27, 1890	Nov. 25, 1885	280,000,000	The Colorado Consolidated Land and Water Company.
The Quahntemoc Reservoir . . . . .	Dolores river . . . . .	Main Canal No. 1	Aug. 27, 1890	July 5, 1886	24,300,000	

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 62, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Beaver Creek Irrigating Ditch . . . .	Beaver creek . . . . .	April 2, 1889	Spring, 1876	15	. . . . C. P. Foster and R. G. Radeka
The Foster Irrigating Ditch . . . . .	McDonnough gulch . . . .	April 2, 1889	Spring, 1877	2	. . . . . C. P. Foster
The Little Cimarron Ditch . . . . .	Little Cimarron . . . . .	April 29, 1890	Not given	Not given	. . . . . Not stated
The Cimarron Feeder of Garnet Ditch . .	W. Branch Cimarron . . . .	May 22, 1890	Sept. 23, 1889	110	. . . . The Garnet Ditch Company

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 63, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Sherard and Hughes Ditch	East creek . . . .	Jan. 16, 1889	May, 1884	13.50	. . . . . P. H. Sherard and Geo. H. Hughes
The Boyle Ditch . . . . .	Clark creek . . . .	May 15, 1890	April 25, 1890	3	. . . . . H. C. Boyle
The Riley Watson Irrigating Ditch . . . . .	Springs . . . . .	May 20, 1890	Nov. 1, 1879	2.25	. . . . . Prescott T. Stevens
The Harms and Hazel Ditch . .	West creek . . . .	June 26, 1890	May 1, 1890	4	. . . . . Louis Harms and George H. Hazel

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 68, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Virginus Ditch . . . . .	Sneffles creek . . . . .	June 27, 1890	June 1, 1890	20	. . . . . The Caroline Mining Company



## WATER DIVISION No. 6.

Green River Division embraces all Water Districts now or hereafter to be formed, consisting of land in the State of Colorado irrigated by water taken from the Green river and its tributaries.

No Superintendent has been appointed for this division. The Water Districts in the division are numbered 43, 44, 54, 55, 56, 57 and 58.

*Water District No. 43*—W. H. Clark, Commissioner, Meeker, Rio Blanco county.

Mr. Clark reports for the year 1889, that he was called upon to divide water, June 15; that he appointed B. F. Clark assistant, to take charge of Flag and Coal creeks, and M. P. Burch to take charge of ditches on Pi-ce-ance creek; that the former was employed eleven days, and the latter thirty-five days; that there was a greater scarcity of water in the above named creeks than ever known before, and, as a consequence, about three-fourths of the crops were lost; that on Pi-ce-ance creek many of the ditches were wrongfully decreed, thereby depriving older ditches of their rightful quantity of water; that a petition was filed with the Court praying for a rehearing, which was granted. That water for domestic use was claimed, in many cases, but no ditch was permitted to carry water for that purpose alone.

He further reports that Senate Bill No. 14, Session Laws, 1889, which provides "that the person upon whose lands seepage or spring waters first arise, shall have the prior right to such waters, if capable of being used upon his lands," practically annuls the decree on all the smaller streams in his district, and especially as

to Pi-ce-ance creek; that the latter creek, with its numerous tributaries heading on the Book Plateau, at an elevation of about 8,000 feet, drains between 650 and 800 square miles of territory; that nearly all of these tributaries have water near their sources during the greater part of the irrigating season, but are, with the exceptions of Stuart Gulch, Willow and Black Sulphur creeks, dry at the mouth; that, in all cases where the streams head on the Great Divide, there are to be found springs near the mouth, discharging from one to ten cubic feet per second; that the waters from these springs have been appropriated and decreed to ditches lower down, but that subsequently the land immediately below and including the springs have been occupied and the waters from the springs claimed thereon to the great damage of older and decreed rights.

He thinks the law should be repealed, so far as it affects spring waters, as it effectually defeats the ends of justice in that part of the State.

Mr. Clark also reports more attention being given to the building of reservoirs for the storage of storm waters, and that the year 1889 has demonstrated the adaptability of the White River Valley soils for the raising of wheat—the yield in many cases being over fifty bushels per acre.

For 1890, Mr. Clark reports an increased water supply over 1889, and no loss of crops, the supply being sufficient for all purposes.

Following will be found statistical statement for 1890:

## COMMISSIONER'S REPORT, A. D. 1890.

DIVISION No. 6—DISTRICT No. 43.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Number of acres irrigated in district
The Powell Park Ditch . . . . .	3.50	230	22	1,900	50	50	450	835	15	..
The Elk Creek Ditch . . . . .	.50	200	2.50	90	..	..	70	50	..	..
The Wright Ditch . . . . .	.75	180	1.50	60	..	..	43	15	..	..
The Coal Creek Ditch No. 1 . . . . .	1.25	220	4.50	600	..	20	320	80	..	..
The P. & L. Ditch . . . . .	.25	200	.40	25	..	..	10	..	..	..
The Martin Ditch . . . . .	1	220	1.75	100	..	..	50	10	..	..
The Meeker Ditch . . . . .	3.50	235	12	300	25	10	50	80	..	..
The Old Agency Ditch . . . . .	4	210	21	1,000	30	40	500	425	..	..
The Metz Ditch . . . . .	1.40	200	1.50	80	..	..	40	25	..	..
The La Camp Ditch . . . . .	1	200	2.50	80	..	4	25	25	..	..
The Laver Ditch . . . . .	1.50	200	1	110	..	..	60	2	..	..
The Home Ditch . . . . .	1	90	1	80	..	..	50	2	..	..
The Ryan Ditch . . . . .	1.10	210	2	110	..	..	60	20	..	..

Ditch	Acreage	Cuttings	Seedlings	Plants	Stakes
The Willow Creek Ditch No. 1 . . . . .	.70	180	2	60	30
The Willow Creek Ditch No. 2 . . . . .	.50	100	1	45	25
The Willow Creek Ditch No. 3 . . . . .	.50	100	1	40	20
The Niblock Ditch . . . . .	2.25	220	5.40	300	110
The South Side High Line Ditch . . . . .	2.50	230	6	600	280
The Schutte Ditch . . . . .	.50	90	.50	40	20
The Little Beaver Ditch . . . . .	2.75	40	1	160	30
The Hughes Ditch No. 1 . . . . .	1	160	1	80	60
The Neitz and Reigan Ditch . . . . .	2	60	1	125	40
The Payson Ditch . . . . .	.30	30	.50	60	20
The Harp Ditch . . . . .	1.50	50	1	80	45
The Lone Tree Ditch . . . . .	.50	40	.40	40	10
The Miller Ditch . . . . .	.75				
The Coal Creek Mesa Ditch . . . . .	4.25	25	1	80	40
The Cox Ditch . . . . .	1	200	1	80	15
The Hayes Ditch . . . . .	1	75	1	50	30
The Little Ditch . . . . .	1.25	210	2.50	110	50
The Big Beaver Ditch . . . . .	2	180	1.75	100	40
The High Line Ditch . . . . .	8.25	220	31.12	3,500	450
The Wilson Ditch . . . . .	.50	25	.50	60	
The Lawyer Ditch . . . . .	1	180	1	60	40
The Hughes Ditch No. 2 . . . . .	1.50	150	.30	60	40

## COMMISSIONER'S REPORT, A. D. 1890—Continued.

NAME OF DITCH	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Gilmore Ditch . . . . .	1	175	1	55	. . . . .	. . . . .	30	. . . . .	. . . . .	. . . . .
The Nichols Ditch . . . . .	1.25	200	.75	80	. . . . .	. . . . .	25	30	. . . . .	. . . . .
The B., A. & B. Ditch . . . . .	3	100	1	320	. . . . .	. . . . .	15	50	. . . . .	. . . . .
The Coal Creek Valley Ditch. . . . .	1.50	190	1	100	. . . . .	. . . . .	40	55	. . . . .	. . . . .
The Wagner Ditch . . . . .	.75	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Piece-ance Ditch . . . . .	1.50	180	2	120	. . . . .	60	60	10	. . . . .	. . . . .
The Hay Ditch . . . . .	.75	100	1	80	. . . . .	. . . . .	40	. . . . .	. . . . .	. . . . .
The Melvin Ditch . . . . .	1.50	180	.50	110	. . . . .	. . . . .	25	20	. . . . .	. . . . .
The Howard Ditch . . . . .	1	120	1	80	. . . . .	. . . . .	45	5	. . . . .	. . . . .
The Larson Ditch . . . . .	2.50	150	1	300	20	40	70	80	. . . . .	. . . . .
The Home Supply Ditch . . . . .	.75	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Rooney Ditch . . . . .	1	200	1.25	100	. . . . .	. . . . .	20	30	. . . . .	. . . . .
The Emily Ditch . . . . .	1	200	1.25	120	. . . . .	. . . . .	30	25	. . . . .	. . . . .
The Lowland Ditch . . . . .	.80	185	.2	120	. . . . .	. . . . .	80	25	. . . . .	. . . . .



Ditch	Acres	Cu Yds.	Feet	Days	No. Men
The Case & Storey Ditch . . . . .	1.75	50	1	140	40
The B., M. & H. Ditch . . . . .	4	200	3	360	200
The Pile Ditch . . . . .	.50	100	.50	40	20
The Burch Ditch No. 1 . . . . .	1.50	200	.50	120	40
The Howey Ditch . . . . .	1.25	160	1	100	60
The Wallace Ditch . . . . .	.50	160	1.25	100	40
The D. D. Taylor Ditch . . . . .	1.25	180	2	100	40
The Latham Ditch . . . . .	.50	120	.70	140	80
The M., H. & M. Ditch . . . . .	3.50	.	.	.	.
The Beard & Watson Ditch . . . . .	1	120	.75	100	20
The Oldland Ditch . . . . .	1.50	150	1.50	160	80
The Griffith Ditch . . . . .	.50	60	.50	50	10
The Youch Ditch . . . . .	1.25	180	1.50	90	15
The Duck Creek Ditch . . . . .	.50	.	.	.	.
The Spaulding Ditch . . . . .	.75	125	1.50	100	20
The B. & M. Ditch . . . . .	2.50	140	1.50	400	48
The Jessup Ditch No. 1 . . . . .	.10	60	1	50	20
The Blue Grass Ditch . . . . .	.10	60	.50	45	30
The Sayer Spring Ditch . . . . .	.25	90	1.25	60	35
The Burch Ditch No. 2 . . . . .	1	90	1	80	30
The White River City Ditch . . . . .	2.25	.	.	.	.
The Oak Ridge Park Ditch . . . . .	3.50	40	6	1,000	220



## COMMISSIONER'S REPORT, A. D. 1890—Concluded.

NAME OF DITCH.	Length thereof in miles	Number of days water was carried therein	Average amount of water carried during season of 1890 in cubic feet per second of time	Number of acres that can be irrigated therefrom.	Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom.	Number of acres of other crops irrigated therefrom.	Number of acres irrigated from seepage	Total number of acres irrigated in district
The Monmouth Ditch . . . . .	1.25	25	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Jessup Ditch No. 2 . . . . .	.10	60	1	50	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Upper Ditch . . . . .	.50	90	1	40	. . . . .	. . . . .	. . . . .	4	. . . . .	. . . . .
The Barnhart Ditch . . . . .	1.25	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Reigan Ditch No. 1 . . . . .	.60	50	.50	40	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Reigan Ditch No. 2 . . . . .	.80	50	.75	30	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Taylor Ditch . . . . .	.40	40	.50	40	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Hunter Ditch . . . . .	.40	50	.50	50	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Ebler Ditch . . . . .	.50	40	.60	50	. . . . .	. . . . .	. . . . .	20	. . . . .	. . . . .
The Florence Ditch. . . . .	1.50	80	1	40	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Niblock Ditch, extension of . . . . .	11	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Little Colorow Ditch. . . . .	2.50	230	4	150	. . . . .	. . . . .	. . . . .	60	. . . . .	. . . . .
The Monitor Ditch . . . . .	1.75	180	2	75	. . . . .	. . . . .	. . . . .	10	. . . . .	. . . . .
The Fawn Creek Ditch. . . . .	.50	80	.50	40	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Douglas Creek Ditch . . . . .	5.50	180	2.50	360	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
The Buckeye Ditch. . . . .	1.50	220	2	100	. . . . .	. . . . .	. . . . .	25	. . . . .	. . . . .
Totals in district . . . . .	133.55	. . .	191.17	160.60	255	329	4,976	3,419	55	9,034

The following districts have no Water Commissioners, applications for their appointment not having been made:

*Water District No. 44*—Consists of all lands irrigated by water taken from that portion of the Yampa river above the mouth of Snake river and below the mouth of Fortification creek, and from the streams draining into the said portion of the Yampa river.

*Water District No. 54*—Consists of all lands in the State of Colorado irrigated by water taken from that portion of the Little Snake river and its tributaries above the most westerly intersection of said river with the Colorado State line.

*Water District No. 55*—Consists of all lands in the State of Colorado irrigated by water taken from that portion of the Yampa river below Water District No. 44, and from the streams draining into the said portion of Yampa river not included in Water District No. 54.

*Water District No. 56*—Consists of all lands in the State of Colorado irrigated by water taken from that portion of the Green river embraced within the boundaries of the county of Routt, and from the streams draining into the said portion of the Green river, except the Yampa river and its tributaries.

*Water District No. 57*—Consists of all lands irrigated by water taken from that portion of the Yampa river above Water District No. 44 and below the mouth of Elk creek, and from the streams draining into the said portion of the Yampa river.

*Water District No. 58*—Consists of all lands irrigated by water taken from the Yampa river above Water District No. 57, and from the streams draining into the said portion of the Yampa river.

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 43, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE, FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Douglas Creek Ditch . . . . .	Douglas creek . . . . .	Dec. 17, 1888	Aug. 1 1888	11.50	Charles P. Hill
The Buckeye Ditch . . . . .	Flag creek . . . . .	Dec. 31, 1888	Oct. 5, 1888	1.16	W. S. Collins
The Coal Creek Ditch No. 1 . . . . .	Coal creek . . . . .	Jan. 19, 1889	May 14, 1883	Not given	William H. Card <i>et al</i>
The Martin Ditch . . . . .	Coal creek . . . . .	Jan. 19, 1889	June 7, 1883	2	George W. Martin
The Florence Ditch . . . . .	Stewart gulch . . . . .	May 1, 1889	June 3, 1888	3	Florence E. Collins
The George E. Howard Ditch . . . . .	Dry Piceance creek . . . . .	May 27, 1889	May 28, 1887	5.70	George Edmond Howard
The Fawn Creek Ditch . . . . .	E. Fork Fawn creek . . . . .	June 17, 1889	May 1, 1887	3	John M. Pulver
The H. S. Jessup Ditch . . . . .	Stewart gulch . . . . .	July 13, 1889	June 14, 1887	7.19	H. S. Jessup
The Highland Ditch . . . . .	White river . . . . .	Sept. 28, 1889	May 1, 1886	60.60	The Highland Ditch Company
The Hammond Ditch . . . . .	White river . . . . .	Nov. 13, 1889	May 1, 1886	10.03	Lynan C. Hammond
The Jessup Extension of Oldland Ditch . . . . .	Piceance creek . . . . .	Dec. 7, 1889	April 22, 1887	9.82	Charles W. Jessup
The Maylin Ditch . . . . .	Taylor creek . . . . .	Jan. 4, 1890	Not given	4	Owen Maylen
The G. V. Ditch . . . . .	Miller creek . . . . .	Feb. 3, 1890	May 1, 1886	5.625	Frank Smith <i>et al</i>
The G. V. Ditch, first enlargement . . . . .	Miller creek . . . . .	Feb. 3, 1890	April 1888	10.85	Frank Smith <i>et al</i>
The G. V. Ditch, second enlargement . . . . .	Miller creek . . . . .	Feb. 3, 1890	Sept. 15, 1889	18.475	Frank Smith <i>et al</i>

The Schweizer Ditch . . . . .	Feb. 21, 1890	Aug. 7, 1886	6.90	John D. Schweizer and Scott Sawyer
The Big Beaver Ditch . . . . .	Feb. 24, 1890	April 5, 1886	6.94	David Steel
The Coon Ditch . . . . .	Feb. 24, 1890	June 25, 1888	6.94	Marcus Coon
The German Ditch . . . . .	Mar. 29, 1890	Mar. 25, 1889	11.30	Hermann Richner
The McKee Ditch . . . . .	Mar. 29, 1890	May 11, 1884	14.31	Hermann Richner
The Frank Smith Ditch . . . . .	April 3, 1890	May 1888	10.67	Frank Smith
The West Fork Ditch No. 1 . . . . .	April 3, 1890	May 1888	17.47	Irwin D. Myers
The West Fork Ditch No. 2 . . . . .	April 3, 1890	May 1888		
The Frank Myers Ditch . . . . .	April 3, 1890	Aug. 27, 1889	10.67	Frank J. Myers
The White River Irrigation Co.'s Ditch . . . . .	April 25, 1890	Feb. 8, 1890	142.236	The White River Irrigation Co
The Jim Smith Ditch . . . . .	May 17, 1890	April 16, 1890	11.72	James Smith
The Pat Reigan Ditch . . . . .	May 17, 1890	April 20, 1885	7.44	Ellen Reigen
The Loring Ditch . . . . .	June 17, 1890	Oct. 13, 1888	37.50	William B. Loring <i>et al</i>
The Ute Creek Ditch . . . . .	Aug. 21, 1890	July 25, 1890	10.32	Mrs. Ora H. Watson
The Ute Mesa Ditch . . . . .	Aug. 21, 1890	Aug. 13, 1890	10.32	Mrs. Ora H. Watson
The Park Creek Ditch . . . . .	Oct. 25, 1890	June 7, 1890	9.33	Marcus C. Beckman
The Sulphur Spring Ditch . . . . .	Oct. 25, 1890	June 7, 1890	11.15	Marcus C. Beckman
The Driefuss Ditch . . . . .	Nov. 5, 1890	May 5, 1885	5.77	H. M. Driefuss <i>et al</i>
The Warren Ditch . . . . .	Nov. 12, 1890	May 15, 1885		W. G. Warren
The Streb Ditch . . . . .	Nov. 25, 1890	Oct. 15, 1890	5.125	Conrad Streb
The Cherry Creek Ditch . . . . .	Nov. 25, 1890	June 14, 1889	5.50	Conrad Streb

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 43, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Douglas Creek Reservoir	Douglas creek . . . . .	On the stream . . . . .	Dec. 17, 1888	April 7, 1885	1,803,963	Charles P. Hill
The Larson Reservoir . . . . .	Gulch, unnamed . . . . .	On the stream . . . . .	Jan. 18, 1889	July 20, 1888	Not given	Henry C. Larson
The Larson Reservoir No. 2 . . . . .	{ Branch Nineteen- Mile creek	On the stream . . . . .	Sept. 9, 1889	May 10, 1889	1,018,750	Henry C. Larson
The Morgan Reservoir . . . . .	Piceance creek . . . . .	On the stream . . . . .	Oct. 1, 1890	Sept. 15, 1889	3,480,000	Frank Morgan, John Prechtel



# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 44, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's Office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Deer Creek & Morrapas Ditch	{ Morrapas & Deer creeks	Dec. 17, 1888	. . . . . 1887	Not given	. . . . . Riley Hamilton <i>et al</i>
The North Fork Ditch . . . . .	Big Gulch creek	Mar. 4, 1889	Oct. 13, 1888	12.80	. . . . . John W. Slearly and Thomas W. Smith
The Dodson Ditch No. 1 . . . . .	Hodges creek . . . . .	April 9, 1889	May 25, 1887;	2	. . . . . John M. Dodson
The Dodson Ditch No. 2 . . . . .	Hodges creek . . . . .	April 9, 1889	Not given	2	. . . . . John M. Dodson
The Weldon Ditch . . . . .	{ North fork E. branch of Williams fork	July 8, 1889	April 19, 1889	5	. . . . . Weldon Rider
The Freeman Ditch . . . . .	Milk creek . . . . .	Sept. 30, 1889	Sept., 1888	4	. . . . . A. D. Freeman
The Yampah Valley Stock Breeding Co. Irrigating Ditch . . . . .	Yampa river . . . . .	Nov. 19, 1889	Oct. 22, 1887	15	. . . . . The Yampah Valley Stock Breeding Co
The Yampah Valley Stock Breeding Co. Irrigating Ditch, enl {	Yampa river . . . . .	Dec. 7, 1889	Oct. 23, 1889	5	. . . . . The Yampah Valley Stock Breeding Co
The Mary Dunn Ditch . . . . .	Beaver creek . . . . .	Dec. 16, 1889	July 1, 1889	5.80	. . . . . Mary Dunn
The Peterson & Dunn Ditch . . . . .	Beaver creek . . . . .	Dec. 16, 1889	April 10, 1889	12.70	. . . . . H. C. Peterson <i>et al</i>
The Homestead Gulch Irrigating Ditch . . . . .	Homestead gulch . . . . .	April 19, 1890	May 7, 1888	1.50	. . . . . J. C. Peck
The No Name Irrigating Ditch. . . . .	No Name gulch . . . . .	April 19, 1890	Aug 27, 1885	1.50	. . . . . Nancy A. Searey
The Peck Ditch . . . . .	Creek, unnamed . . . . .	April 19, 1890	May 16, 1887	4	. . . . . James C. Peck
The Spring Creek Irrigating Ditch . . . . .	Spring creek . . . . .	April 19, 1890	Aug. 27, 1885	1.50	. . . . . Nancy A. Searey



STATEMENT CONCERNING DITCHES—*Concluded.*

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Deep Cut Irrigating Ditch . . . . .	Bear river . . . . .	April 21, 1890	May 1, 1886	48	J. L. Tower <i>et al</i>
The Waste Ditch . . . . .	Waste waters . . . . .	May 21, 1890	April 5, 1889	19	Samuel H. Tharp
The W. Fork of Oak Creek Ditch . . . . .	Oak creek ditch . . . . .	May 21, 1890	Mar. 25, 1889	10	Samuel H. Tharp
The Coal Bank Gulch Irrigat. Ditch . . . . .	Coal Bank gulch . . . . .	May 26, 1890	May 25, 1888	100 inches	J. C. Peck
The Bear River Ditch . . . . .	Yampa river . . . . .	Oct. 2, 1890	Not given	10	Abram and Charles R. Fiske

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 54, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH	Stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Morgan Ditch . . . . .	N. F'k Snake river	July 13, 1889	Sep., 1884	22.50	William T. Morgan
The Ole Bull Ditch . . . . .	E. F'k Solomon cr'k	Aug. 25, 1890	Aug. 12, 1890	63.20	The Ole Bull Mining & Smelting Company
The Morgan Ditch, enlargement .	N. F'k Snake river	Aug. 28, 1890	Sep., 1884	2.50	T. S. Gardner

## STATEMENT CONCERNING DITCHES

IN WATER DISTRICT NO. 57, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Name of stream from which water is taken	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Smith Ditch . . . . .	Elk Head creek . . . . .	Dec. 31, 1888	Sept. 13, 1886	18	Michael H. Smith
The Gilbralter Ditch . . . . .	Bear river . . . . .	Jan. 3, 1889	Mar. 8, 1888	43	{ Albert Squire, Smith & Dallas, Mich. Elmer, Oscar Elmer, Matt Elmer, William Pritchard, A. M. Walker and L. E. Kitchens
The J. J. L. Ditch . . . . .	Fish creek . . . . .	Jan. 7, 1889	Aug. 30, 1888	30	{ Louis M. Long, John E. Long and J. F. Sablin
The Brock Creek Ditch . . . . .	Bear river . . . . .	Feb. 13, 1889	Oct. 1, 1888	17.50	Robert H. Green
The Mason Ditch . . . . .	Dry creek . . . . .	Mar. 6, 1889	May 1, 1888	15	William N. Mason
The Dennis-Blewitt Ditch . . . . .	Bear river . . . . .	Mar. 8, 1889	Nov. 12, 1888	17	{ Henry Dennis, Joseph Dennis, Henry Blewitt and Christ'r Blewitt
The Wolf Creek Ditch . . . . .	Wolf creek . . . . .	Mar. 25, 1889	May 18, 1886	20	William H. Rose
The Straight Line Irrigating Ditch . . . . .	Fortification creek . . . . .	Mar. 8, 1889	Sept. 15, 1886	10	James Wadge
The Little Morrison Creek Ditch . . . . .	Little Morrison creek . . . . .	Mar. 2, 1889	Oct. 21, 1888	5.52	Isabella A. Melbride
The Yellow Jacket Ditch . . . . .	Bear river . . . . .	Mar. 2, 1889	Oct. 2, 1888	9.94	Douglas D. Lees
The Buchanan Enlarge't of Smith Ditch . . . . .	Elk Head creek . . . . .	April 10, 1889	Dec. 7, 1888	7.20	R. H. Buchanan
The Stockbridge Ditch . . . . .	Fish creek . . . . .	Aug. 3, 1889	Sept., 1888	5	Charles H. Stockbridge
The Reis Ditch . . . . .	Middle creek . . . . .	Jan. 3, 1890	Summer, 1888	7	Stephen Reis
The Connell Ditch . . . . .	Trout creek . . . . .	Jan. 20, 1890	Sept. 15, 1889	10	Dennis Connell

The Shelton Ditch . . . . .	Bear river . . . . .	Jan. 27, 1890	Spring, 1883	75	William R. Walker and eleven others
The "Marshall Roberts" Ditch . . . . .	Bear river . . . . .	Feb. 1, 1890	Nov. 22, 1888	22	{ Roberts & McLaughlin and A. J. Marshall
The Davis Irrigating Ditch . . . . .	Williams fork . . . . .	Feb. 8, 1890	Nov. 4, 1889	5	. . . . . E. H. Davis
The Peck Irrigating Ditch No. 2 . . . . .	Williams fork . . . . .	Feb. 12, 1890	Sept. 1, 1888	10	. . . . . J. C. Peck and N. A. Searcy
The Baker High Line Ditch . . . . .	Fortification creek . . . . .	Feb. 17, 1890	Not given	Not given	. . . . . Charles E. Baker
The Milner Ditch . . . . .	Burgess creek . . . . .	Mar. 24, 1890	Fall, 1888	8	. . . . . F. E. and James M. Milner
The McKinlay Ditch . . . . .	Elk Head creek . . . . .	May 14, 1890	Mar. 1, 1890	22.50	} . The Elk Head Ranch Company
		May 14, 1890	Mar. 1, 1890	30	
The Salt Creek Ditch . . . . .	Salt creek . . . . .	Aug. 1, 1890	June 2, 1890	8	Peter S. Anderson and F. O. Drown
The Felix Borghi Ditch . . . . .	Bear river . . . . .	Aug. 1, 1890	May 15, 1890	5	. . . . . Felix Borghi
The Cow Creek Ditch No. 1 . . . . .	Cow creek . . . . .	Sept. 26, 1890	June 11, 1890	8	. . . . . Joseph Dennis
The Island Home Ditch . . . . .	Bear river . . . . .	Oct. 22, 1890	April 15, 1889	7	. . . . . John Robinson

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 57, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water therefor	Name of ditch leading water thereto	Date of filing in State Engineer's office	Date of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Drown Reservoir . . . .	Stream unnamed. . .	On the stream . . .	Sept. 4, 1890	Not given	Not given	. . . . . Not stated

# STATEMENT CONCERNING DITCHES

IN WATER DISTRICT No. 53, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Burgess Ditch. . . . .	Walton creek. . . . .	Dec. 12, 1888	Nov. 10, 1888	12.50	Phillip A. Burgess
The Whipple Ditch. . . . .	Bear river . . . . .	Dec. 13, 1888	May, 1888	15	D. W. & J. W. Whipple
The Wheeler Ditch . . . . .	Van Camp creek . . . . .	Dec. 21, 1888	Sep. 24, 1888	6	William E. Wheeler
The Ira J. Van Camp Irrigating Ditch . . . . .	Roaring Fork . . . . .	Jan. 18, 1889	Oct. 13, 1887	10	Ira J. Van Camp
The Mandall Ditch . . . . .	Roaring Fork . . . . .	Jan. 18, 1889	May 7, 1888	102	{ M. Randall, William Bird, A. C. Burgess, John Phillips, Frank Bird, Berton Acton and Martin Boor.
The Raspberry Creek Ditch . . . . .	Raspberry creek . . . . .	Jan. 18, 1889	Dec. 24, 1888	9	{ D. W. Whipple, Louis L. Wilson, Mrs. A. J. Stafford, J. W. Whipple, R. W. Laughlin and Lawson Bird.
The Egevia Ditch . . . . .	Bear river . . . . .	Feb. 2, 1889	May 1, 1888	66.70	{ D. W. Whipple, Louis L. Wilson, Mrs. A. J. Stafford, J. W. Whipple, R. W. Laughlin and Lawson Bird.
The Stafford Ditch. . . . .	Bear river . . . . .	Feb. 16, 1889	June, 1884	15.47	{ D. W. Whipple, Louis L. Wilson, Mrs. A. J. Stafford, J. W. Whipple, R. W. Laughlin and Lawson Bird.
The Ducey Ditch No. 2 . . . . .	Mid. Fork Deep creek . . . . .	April 1, 1889	Aug. 20, 1888	4.50	J. J. Ducey
The Roaring Fork Ditch Co.'s Ditch . . . . .	Roaring Fork . . . . .	April 17, 1889	Sept 27, 1888	62	The Roaring Fork Ditch Company
The Buckingham & Mandall Ditch . . . . .	Roaring Fork . . . . .	Mar. 24, 1889	1886	26.25	{ A. H. Buckingham, N. Mandall, E. Mandall and J. E. Smith.
The Speckled Trout Ditch. . . . .	Bear river . . . . .	July 6, 1889	June 1, 1886	4.34	William F. King
The North Hunt Creek Ditch . . . . .	North Hunt creek . . . . .	July 17, 1889	April 15, 1889	Not given	Alexander Gray and W. R. Wilson
The Lower Hunt Creek Ditch . . . . .	Hunt creek. . . . .	July 17, 1889	May, 1884	4.37	Alexander Gray
The Raspberry Creek Ditch No. 2 . . . . .	Raspberry creek . . . . .	July 17, 1889	Not given	12	B. F. Jones



## STATEMENT CONCERNING DITCHES—Continued.

NAME OF DITCH OR CANAL	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet per second	NAME OF CLAIMANT
The Old Cabin Ditch . . . . .	Bear river . . . . .	July 31, 1889	June, 1885	7.70	Herod Fulton and S. H. Tharp
The Graham & Bennett Ditch . . . . .	Elk river . . . . .	Aug. 3, 1889	May, 1888	8	C. C. Graham and N. W. Bennett
The St. John Ditch . . . . .	Elk river . . . . .	Aug. 3, 1889	Spring, 1889	6	W. N. St. John
The South Side Ditch . . . . .	Bear river . . . . .	Aug. 3, 1889	Apr. 6, 1889	8.15	{ B. F. Jones, W. M. Denney and Herod Fulton.
The James Wheeler Ditch . . . . .	Elk river . . . . .	Aug. 7, 1889	Fall, 1888	6	James Wheeler
The Wheeler Brothers Ditch . . . . .	Elk river . . . . .	Aug. 7, 1889	Fall, 1888	7	Charles and James Wheeler
The Oakton Ditch . . . . .	Bear river . . . . .	Aug. 12, 1889	Mar. 27, 1889	10	{ William F. King, Alexander Gray, L. J. Garbarino, and S. H. Tharp
The Hoover & Jacques Ditch . . . . .	Elk river . . . . .	Aug. 17, 1889	July, 1887	8	J. B. Hoover and Maurice Jacques
The W. B. Moore Ditch . . . . .	Harrison creek . . . . .	Aug. 19, 1889	July 28, 1889	20	W. B. Moore
The Elgin Creek Ditch . . . . .	Elgin creek . . . . .	Aug. 21, 1889	July 13, 1889	10	Paul H. Elgin and Mor. R. Laucaster
The Pennsylvania Ditch . . . . .	Roaring Fork . . . . .	Sept. 3, 1889	June, 1883	13.20	{ William W. Montgomery
The South Side Ditch . . . . .	A spring branch . . . . .	Sept. 3, 1889	Apr. 18, 1887	11.10	
The Island Ditch . . . . .	Bear river . . . . .	Sept. 7, 1889	Sept. 18, 1888	30	A. H. Allen and Annie C. Burgess
The Bellman Ditch . . . . .	Antelope creek . . . . .	Sept. 11, 1889	Sept. 5, 1889	4	W. F. Bellman
The Brown Cañon Ditch . . . . .	Bear river . . . . .	Sept. 11, 1889	Sept. 3, 1889	4	Walter H. Brown
The Lafon Ditch . . . . .	South Fork Hunt creek . . . . .	Sept. 11, 1889	April, 1888	8.30	Nicholas A. Lafon
The North Side Ditch . . . . .	Bear river . . . . .	Sept. 11, 1889	April 4, 1889	5.145	Benjamin F. Jones

# STATE ENGINEER.

55  
17

The Trout Creek Ditch No. 1 . . . . .	Trout creek . . . . .	Sept. 19, 1889	May 20, 1889	8.28	John A. Whetstone
The Trout Creek Ditch No. 2 . . . . .	Trout creek . . . . .	Sept. 19, 1889	May, 1888	15.65	John A. Whetstone
The Priest Ditch . . . . .	Priest creek . . . . .	Sept. 25, 1889	Sept. 10, 1889	4	C. F. Priest and Elmer Burgess
The I. Lancaster & J. Elgin Ditch. . . . .	Roaring Fork . . . . .	Sept. 28, 1889	April 10, 1889	8	Israel Lancaster and James Elgin
The Trout Creek Ditch No. 3 . . . . .	Trout creek . . . . .	Oct. 7, 1889	April 15, 1889	23.22	{ John A. Whetstone, Henry Como, Wm. H. Jones & Geo. H. Kieckner
The Scribner Ditch . . . . .	Middle Hunt creek. . . . .	Oct. 8, 1889	July 19, 1889	10	Clarence J. Scribner
The Priest Ditch No. 2 . . . . .	Walton creek. . . . .	Oct. 9, 1889	Sept. 10, 1889	5	Chester Priest
The Priest Ditch, enlargement . . . . .	Priest creek . . . . .	Oct. 9, 1889	Sept. 17, 1889	4	Elmer Burgess
The Weiskopf Ditch . . . . .	Bear river . . . . .	Oct. 23, 1889	Sept. 4, 1889	6	John Weiskopf
The Pleasant Valley Ditch . . . . .	Bear river . . . . .	Nov. 6, 1889	Aug. 21, 1889	44.28	{ T. W. Monson, H. A. Monson, G. F. Monson, D. A. Fussell, H. C. Mon- son & William F. Nichols
The Hernage & Coleby Ditch . . . . .	Roaring Fork . . . . .	Nov. 13, 1889	. . . . . 1888	24	H. J. Hernage and Albert P. Kolbe
The Crowell Ditch . . . . .	Slate creek . . . . .	Nov. 23, 1889	Oct. 26, 1889	5	David C. Crowell
The Baxter Ditch . . . . .	Bear river . . . . .	Dec. 13, 1889	Sept. 30, 1889	20.56	{ Austin Hamilton, Mho Baxter, John Summer, G. A. Howlett, G. M. Lang and J. A. Phillips.
The Welch & Monson Ditch, . . . . .	Harrison creek. . . . .	Dec. 16, 1889	Oct. 9, 1889	11.80	John W. Monson and W. E. Welch
The Campbell Ditch. . . . .	Campbell creek . . . . .	Jan. 10, 1890	Oct. 25, 1889	5	John A. Campbell
The Franz Ditch . . . . .	Elk river . . . . .	Jan. 10, 1890	Mar., 1887	10	Charles J. Franz
The Kopf Ditch . . . . .	Roaring Fork . . . . .	Jan. 10, 1890	. . . . . 1889	6	Max Kopf
The Hoag & Laughlin Ditch . . . . .	Watson creek . . . . .	Jan. 10, 1890	. . . . . 1885	8	Elmer Hoag and R. W. Laughlin
The Laughlin & Hoag Ditch . . . . .	Bear river . . . . .	Jan. 10, 1890	. . . . . 1885	10	R. W. Laughlin and Elmer Hoag
The Simon Ditch . . . . .	Hunt creek. . . . .	Jan. 10, 1890	June, 1888	10	Peter Simon
The Union Ditch . . . . .	Bear river . . . . .	Jan. 10, 1890	Nov. 14, 1889	10	D. D. Lees, W. F. Thayer & Leo Thayer
The Lee Irrigating Ditch . . . . .	Elk river . . . . .	Mar. 29, 1890	June 14, 1888	12	Joseph Lee

## STATEMENT CONCERNING DITCHES—Concluded.

NAME OF DITCH	Stream from which water is diverted	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet, per second	NAME OF CLAIMANT
The Deer Creek Ditch . . . . .	Deer creek . . . . .	April 5, 1890	Oct. 31, 1889	6	. . . . . John Hart
The Larramore Ditch . . . . .	Watson creek . . . . .	April 19, 1890	April, 1885	11	. . . . . W. T. Larramore
The Trelease Ditch . . . . .	Trull creek . . . . .	May 9, 1890	April 24, 1890	5	. . . . . Charles Trelease
The Adams Ditch . . . . .	Eddy creek . . . . .	May 14, 1890	May 4, 1890	7	. . . . . William A. Adams
The Trull & Morin Ditch . . . . .	Elk river . . . . .	May 16, 1890	May 1, 1890	10	. . . . . George E. Trull and J. M. Morin
The Americo Ditch . . . . .	Bear river . . . . .	May 21, 1890	April 24, 1890	6	. . . . . Americo Borghi
The Larson Ditch . . . . .	Elk river . . . . .	May 21, 1890	May 1, 1889	12	{ Charles Larson, Charles Osberg and J. M. Morin.
The Swope & Robinson Ditch . . . . .	The Franz Ditch . . . . .	May 21, 1890	Mar., 1888	10	. . . . . W. R. Swope and I. H. Robinson
The Eddy Ditch . . . . .	Brush creek . . . . .	June 6, 1890	May 26, 1890	5	. . . . . Maryett Eddy
The Rawlinson Ditch . . . . .	Fish creek . . . . .	June 23, 1890	April 15, 1888	7	. . . . . John Rawlinson
The C. W. Ditch . . . . .	Raspberry creek . . . . .	June 25, 1890	April 23, 1890	9.50	. . . . . C. W. Denney
The Jack Creek Ditch . . . . .	Jack Creek . . . . .	June 25, 1890	May, 1889	12	{ Leander Lycan, Ferd. Gochens, R. R. Tharp, J. H. Suttle, Benj. Booco, G. S. Lyon, Merton Lyon & F. A. Metcalf 2d
The Suttle Ditch . . . . .	Bear river . . . . .	July 11, 1890	Nov. 3, 1887	25	{ James F. Price
The Price Ditch . . . . .	Elk river . . . . .	July 19, 1890	May 1, 1888	5	. . . . . Felix Borghi
The Felix Borghi Ditch . . . . .	Bear river . . . . .	Aug. 1, 1890	May 15, 1890	5	. . . . . P. S. Anderson and F. O. Drown
The Salt Creek Ditch . . . . .	Salt creek . . . . .	Aug. 1, 1890	June 2, 1890	8	. . . . . Edwin Coleman
The E. Coleman Ditch . . . . .	Branch of Deep creek . . . . .	Aug. 6, 1890	June 20, 1890	8	. . . . . Edwin Coleman

The Renfro Ditch . . . . .	Branch of Deep creek .	Aug. 6, 1890	June 20, 1890	12	. . . . . Charles Renfro
The Smith Ditch . . . . .	Deep creek . . . . .	Aug. 6, 1890	Sept. 5, 1887	10	. . . . . Ernest Smith
The Forsha-Baxter Ditch, extension of .	Bear river . . . . .	Sep. 10, 1890	Aug. 27, 1890	4.56	. . . W. H. Forsha & Wm. I. Milner
The Cow Creek Ditch No. 2 . . . . .	Cow creek . . . . .	Sep. 26, 1890	June 11, 1890	8	. . . . . Joseph Dennis
The Tanner Ditch . . . . .	Sunnyside creek . . . . .	Sep. 27, 1890	July 8, 1890	3	. . . . . Simon Tanner
The Pass Creek Ditch . . . . .	Pass creek . . . . .	Sep. 27, 1890	Not given	1	. . . . . Simon Tanner
The Simon Ditch . . . . .	Sunnyside creek . . . . .	Sep. 27, 1890	June, 1887	1	. . . . . Simon Tanner
The Campbell Ditch . . . . .	Elk river . . . . .	Oct. 7, 1890	Oct. 20, 1886	10	. Henry Campbell & Samuel B. Curry
The Metcalf-Lyon Ditch, enlargement and extension of . . . . .	Oak creek . . . . .	Oct. 24, 1890	June 20, 1890	15	. . . . . Fred. A. Metcalf <i>et al</i>
The Miner Boy's Ditch, extension of .	Waste and other waters	Oct. 27, 1890	Oct. 18, 1890	7	. . . . . Willard O. Cook
The Brush Enlargement of the Elk Valley Ditch and Brush Lateral . . . . .	Elk river . . . . .	Nov. 3, 1890	Oct. 11, 1890	11.10	. . . . . George A. Brush
The Northwestern Colorado Irrigating Ditch or Canal . . . . .	Elk river . . . . .	Nov. 22, 1890	Nov. 7, 1890	2.60	. . . . . Robert McIntosh <i>et al</i>
The Brown & Trullinger Ditch . . . . .	Willow creek . . . . .	Nov. 28, 1890	Aug. 28, 1890	1,200	. . . . . Joseph H. Brown & Edward H. Trullinger
				5.55	

## STATEMENT CONCERNING RESERVOIRS

IN WATER DISTRICT No. 58, RELATIVE TO WHICH STATEMENTS HAVE BEEN FILED IN THE STATE ENGINEER'S OFFICE,  
FROM DECEMBER 1, 1888, TO DECEMBER 1, 1890.

NAME OF RESERVOIR	Name of stream supplying water thereto	Name of ditch leading water thereto	Date of filing in State Engineer's office	Time of commencement of work thereon	Capacity claimed in cubic feet	NAME OF CLAIMANT
The Deer Creek Reservoir No. 1.	Deer creek . . . . .	Deer Creek Ditch .	April 5, 1890	Oct. 31, 1889	1,269,020	. . . . . John Hart
The Deer Creek Reservoir No. 2.	Deer creek . . . . .	Deer Creek Ditch .	April 5, 1890	Oct. 31, 1889	196,100	. . . . . John Hart



# SUMMATION OF CROPS RAISED.

SO FAR AS REPORTED BY WATER COMMISSIONERS.

STATE ENGINEER.

531

	NAME OF DISTRICT.	Number of acres irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres seepage	Total number of acres irrigated in district
1	The South Platte River District . . . . .	5,505	20	2,900	7,880	370	Reservoirs
2	The South Platte River District . . . . .	13,407	704	13,227	23,028	600	. . . . .
3	The Cache la Poudre District . . . . .	26,780	1,926	19,042	86,370	5,104	10,825
4	The Big Thompson District . . . . .	5,440	957	22,886	59,507	1,000	. . . . .
5	The St. Vrain District . . . . .	9,440	2,595	21,675	60,855	500	. . . . .
6	The S. & N. Boulder District . . . . .	13,777	1,945	13,615	28,845	5,530	. . . . .
7	The Clear Creek District . . . . .	30,695	24,035	4,307	40,110	758	. . . . .
8	The South Platte and Cherry Creek District . . . . .	6,495	3,427	3,918	479	. . . . .	. . . . .
9	Reservoirs . . . . .	1,065	268	185	1,683	. . . . .	. . . . .
9	The Bear Creek District . . . . .	. . . . .	742	761	1,193	. . . . .	. . . . .
23	The South Park and South Platte District . . . . .	2,125	. . . . .	75,542	139	. . . . .	. . . . .
64	The South Platte River District . . . . .	3,155	. . . . .	5,700	2,105	. . . . .	. . . . .
	Summation for Division No. 1 . . . . .	117,974	33,619	201,758	312,294	13,862	693,372



## SUMMATION OF CROPS RAISED—Concluded.

## DIVISION No. 2.

NAME OF DISTRICT		Number of acres of alfalfa irrigated therefrom	Number of acres of seeded grasses other than alfalfa irrigated therefrom	Number of acres of natural grasses irrigated therefrom	Number of acres of other crops irrigated therefrom	Number of acres irrigated from seepage	Total number of acres irrigated in district
11	.....	1,145	2,422	3,994	8,091	480	.....
12	.....	1,292	110	480	2,268	170	.....
14	.....	1,612	108	3,130	2,415	.....	.....
15	.....	1,066	229	888	1,232	.....	.....
16	.....	1,578	762	3,282	4,200	.....	.....
17	.....	17,981	122	7,870	19,309	780	.....
Summation for Division No. 2		24,674	3,753	19,344	37,495	1,430	86,606

## DIVISION No. 3.

20	.....	890	1,350	72,150	26,235	.....	.....
21	.....	717	510	27,408	6,448	.....	.....
22	.....	230	380	18,480	12,855	.....	.....
25	.....	72	52	38,544	.....	1,998	.....
Summation for Division No. 3		1,909	2,292	156,582	45,538	1,998	208,319

DIVISION No. 5.

38	1,486	1,446	1,825	3,085	.....
39	197	40	120	514	.....
40	2,465	680	1,609	4,369.50	.....
41	9,766	369	1,728	16,872	1,116
42	2,278	17	467	12,267	.....
45	810	67	1,802	2,106.50	.....
Summation for Division No. 5					
	17,002	2,619	7,551	39,214	1,116
					67,502

DIVISION No. 6.

[illegible]

## WATER DISTRICT No. 2.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW, AT DENVER, FROM 1872 TO 1890,  
INCLUSIVE. ALTITUDE OF STATION, 5,294 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1872	.55	.22	1.71	2.09	3.74	2.07	2.69	1.65	1.57	.68	.69	.29	17.95
1873	.13	.24	.22	2.43	.75	2.24	2	1.41	.89	.73	.16	.53	11.73
1874	.84	.52	.49	1.70	2.43	1.21	3.35	.68	1.34	.64	.08	.17	13.45
1875	.38	.60	.39	2.24	1.94	.43	4.32	1.97	2.89	.22	1.28	.59	17.25
1876	.21	.11	1.80	1.22	8.57	1.10	1.16	2.03	.60	.12	1.50	1.70	20.12
1877	.40	.40	1.40	2.77	2.30	1.93	.33	1.30	.38	2.15	.73	.79	16.38
1878	.10	.48	1.82	.05	2.90	2.78	1.38	2.25	1.23	.80	.67	1.05	15.51
1879	.40	.39	1	2.62	3.36	.32	.64	1.38	.02	.19	.21	.33	10.86
1880	.38	.32	.21	.31	1.11	1.22	1.38	1.46	.89	1.37	.83	.10	9.53
1881	.49	1.22	.87	.50	2.21	.09	2.50	2.33	.57	.32	1.68	. . .	12.78
1882	.57	.20	.20	1.47	2.98	4.96	.66	1.20	.06	.75	.71	.73	14.49
1883	2.35	.45	.21	3.10	4.30	.85	2.27	.75	1.08	1.49	.32	2.32	19.49
1884	.22	.86	.93	3.33	4.61	1.47	.65	1.71	.13	.21	.19	.76	15.07
1885	.41	.75	.97	4.94	2.13	.66	1.33	1.18	1.22	.73	.55	1.08	15.95
1886	.62	.72	2.36	2.79	.09	2.26	.50	1.62	.98	.33	1.93	.87	15.07
1887	.67	.30	.23	2.16	1.13	.53	2.49	1.68	.97	.97	.22	.14	12.49
1888	.11	.37	1.15	1.71	2.66	.29	.41	1.51	.11	.77	.33	.09	9.51
1889	.50	.70	.40	1.34	3.44	1.88	2.94	.33	.28	2.11	.53	.30	14.75
1890	.18	.46	.35	2.50	2.01	. . .	.79	1.89	.17	.64	.30	.04	9.33
Average	.58	.49	.88	2.07	2.77	1.38	1.67	1.54	.81	.81	.68	.63	14.30

## WATER DISTRICT No. 3.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT FORT COLLINS, FROM 1873 TO 1890, INCLUSIVE. ALTITUDE 5,018 FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1873	.25	.16	. . . .	1.20	2.30	1.50	1.30	.85	.75	.42	.20	.17	9.10
1874	.06	.43	1.20	.77	2.95	.65	3.15	.25	. . . .	1	.02	. . . .	10.48
1879	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	1.75	.15	.60	. . . .
1880	.72	1.09	.38	.94	.60	.86	1.80	.37	1.47	2.07	. . . .	.10	. . . .
1881	1.10	.55	1.45	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
1882	. . . .	. . . .	.17	. . . .	4.67	3.07	1.76	.89	2.51	.82	.29	. . . .	. . . .
1883	1	1.50	.68	. . . .	2.51	3.18	. . . .	1.78	1	1.29	trace	1.33	. . . .
1884	1.10	.70	1.15	3.94	4.84	. . . .	. . . .	. . . .	. . . .	.10	1.80	.35	. . . .
1885	1.77	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
1886	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	.18	.33	. . . .
1887	.86	.23	.45	1.10	1.23	1.96	3.05	2.12	.54	.43	.15	. . . .	12.12
1888	.29	.36	.73	1.23	3.39	.47	.60	1.01	.29	.88	.38	.16	9.79
1889	.21	.34	.65	2.07	3.39	2.06	.79	.95	.42	3.16	.43	.02	14.48
1890	.13	.21	.22	3.92	1.19	.13	1.27	3.14	.07	.69	.32	.12	11.41
Average . . . .	.68	.56	.65	1.90	2.71	1.54	1.71	1.26	.78	1.11	.30	.29	11.23

## WATER DISTRICT No. 3.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT GREELEY, FOR PARTS OF THE YEARS 1887 TO 1890, INCLUSIVE. ALTITUDE, 4,750 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1887 . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	.17	.07	. . . . .
1888 . . . . .	.05	.30	.57	. . . .	. . . .	. . . .	1.29	1.77	. . . .	.36	4.80	.06	. . . . .
1889 . . . . .	.30	.30	.57	1.95	1.06	3.12	1.91	1.14	.25	1.96	.21	.22	12.99
1890 . . . . .	.10	.25	.36	2.92	1.21	.14	. . . .	1.67	. . . .	. . . .	. . . .	. . . .	. . . . .
Average . . .	.15	.28	.50	2.43	1.14	1.63	1.60	1.14	.25	2.16	1.73	.12	13.07

## WATER DISTRICT No. 5.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT LONGMONT, FOR PARTS OF THE YEARS 1887 TO 1890, INCLUSIVE. ALTITUDE, 5,000 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1887.	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.25	. . . . .	. . . . .	. . . . .
1888.	. . . . .	. . . . .	. . . . .	1.26	4.11	.04	1.21	.54	.03	1.81	.28	.08	. . . . .
1889.	.21	.73	.41	1.71	3.53	1.68	.21	.37	.63	3.24	.40	.04	12.56
1890.	.35	. . . . .	. . . . .	5.72	. . . . .	.19	.42	2.75	.16	.74	.32	.15	. . . . .
Average . . . . .	.28	.73	.41	2.90	3.82	.63	.61	1.22	.27	1.77	.33	.09	. . . . .



# WATER DISTRICT NO. 7.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT GEORGETOWN,  
FOR THE YEARS 1886 TO 1890, INCLUSIVE. ALTITUDE, 8,500 FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	Total
1886	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1.40	1.91	.68	.85	1.01	. . . . .
1887	1.07	.11	.60	2.11	1.17	.35	2.60	2.21	.84	.47	.32	.86	12.71
1888	.36	.39	.48	.98	2.83	.96	2.82	1.96	.07	.98	.70	.11	12.64
1889	.19	.45	.45	.91	3.45	1.50	1.71	1.31	.90	1.34	1.23	.70	14.93
1890	.35	.82	.86	1.84	1.12	.32	1.75	2.50	.79	.92	.37	.04	11.68
Average . .	.49	.44	.60	1.46	2.14	.78	2.22	1.87	.72	.88	.69	.54	12.99

## WATER DISTRICT No. 7.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT IDAHO SPRINGS,  
FOR THE YEARS 1886 TO 1890, INCLUSIVE. ALTITUDE, 7,569 FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	Total
1886 . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	2.39	.23	.64	. . . .	. . . .	. . . .
1887 . . . . .	. . . .	. . . .	. . . .	. . . .	.37	.52	4.26	3.29	1.27	.64	.31	.43	. . . .
1888 . . . . .	. . . .	. . . .	. . . .	. . . .	4.13	.67	2.69	2.22	.23	1.15	.63	.65	. . . .
1889 . . . . .	.22	.33	.84	1.14	4.36	1.38	2.63	1.26	.59	. . . .	.48	.46	. . . .
1890 . . . . .	.30	.54	. . . .	. . . .	1.53	.38	. . . .	. . . .	. . . .	. . . .	.09	.15	. . . .
Average . .	.26	.43	.84	1.14	2.58	.71	3.19	2.29	.58	.81	.38	.27	. . . .

## WATER DISTRICT No. 8.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT CASTLE ROCK, DOUGLAS COUNTY,  
FOR PART OF THE YEARS 1888 TO 1890, INCLUSIVE. ALTITUDE, 6,200 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888	.....	.....	.....	2.40	.....	.....	.....	.....	.....	.....	.....	.15	.. ..
1889	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1890	.....	.....	.70	1.41	1.51	.10	2.26	2.69	.05	.40	.30	.....	.....

## WATER DISTRICT No. 10.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT COLORADO SPRINGS, FOR PARTS OF THE YEARS 1886 TO 1890, INCLUSIVE. ALTITUDE, 6,080 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886	. . . .	. . . .	. . . .	4.82	.12	. . . .	2.91	1.39	.33	.28	.19	.16	. . . .
1887	.06	.22	.19	1.54	2.24	1.88	4.75	4.42	.80	.35	.40	.08	16.98
1888	.10	.45	.28	1.51	2.42	.01	1.91	1.18	.13	.84	.22	.07	9.12
1889	.16	.60	.12	1.17	2.34	1.77	2.88	1.49	.86	2.08	.16	.14	13.77
1890	.41	.13	.30	3.90	1.43	.44	1.64	4.99	.17	.40	.28	. . .	. . . .
Average . . .	.18	.35	.24	2.59	1.71	1.02	2.82	2.69	.46	.79	.25	. . .	. . . .

# WATER DISTRICT No. 10.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT HUSTED, EL PASO COUNTY, FOR PARTS OF THE YEARS 1886 TO 1890, INCLUSIVE. ALTITUDE, 6,540 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886 . . . . .	. . . .	. . . .	. . . .	. . . .	.35	3.18	1.82	4.37	.16	.33	.25	. . . .	. . . .
1887 . . . . .	. . . .	.13	. . . .	. . . .	2.86	1.60	3.56	2.67	1.23	.53	.30	.15	. . . .
1888 . . . . .	.50	.15	.30	1.66	5.33	.02	1.78	1.35	.19	.84	.22	.02	12.44
1889 . . . . .	.54	.25	.27	2.17	3.23	1.63	2.59	.78	.55	2.03	.33	.28	14.65
1890 . . . . .	.09	.13	0.27	2.61	1.06	.61	2.22	4.49	.19	.73	.05	. . . .	. . . .
Average . . . . .	.38	.16	.28	2.15	2.56	1.41	2.39	2.73	.46	.89	.23	.15	. . . .





## WATER DISTRICT No. 11.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT LEADVILLE, FOR PARTS OF THE YEARS 1888 TO 1890, INCLUSIVE. ALTITUDE, 10,200 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.	Total
1888 . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.35	1.77	1.06	.27	1.30	.68	.31	. . . . .
1889 . . . . .	.52	.48	.68	1.31	2.20	.66	.84	1.58	.53	.69	1.64	1.67	12.80
1890 . . . . .	.42	.68	1.24	.24	. . . . .	. . . . .	.81	.68	1.20	.77	.11	.38	. . . . .
Average . . .	.47	.58	.96	.77	2.20	.45	1.14	1.10	.67	.92	.81	.79	. . . . .

## WATER DISTRICT No. 12.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT CAÑON CITY, FOR THE YEARS  
1888 TO 1890, INCLUSIVE. ALTITUDE, 5,287 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888 . . . . .	1.87	.30	.67	1.61	1.16	. . . .	1.36	2.38	. . . .	.62	.74	. . . .	10.71
1889 . . . . .	.29	1.74	.20	1.92	1.33	.67	1.07	2	1.01	1.18	.78	.25	12.53
1890 . . . . .	.46	.20	.45	4.16	.80	.73	1.20	.94	. . . .	. . . .	.70	.03	. . . .
Average . . .	.87	.75	.44	2.56	1.10	.47	1.21	1.77	. . . .	. . . .	.74	.09	. . . .

## WATER DISTRICT No. 14.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT PUEBLO, FOR THE YEARS 1885 TO 1890, INCLUSIVE. ALTITUDE 4,006 FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1885	. . . . .	.60	.40	1.76	1.86	1.27	2.83	4.62	.82	.57	. . . .	.73	. . . .
1886	. . . . .	.42	.46	1.71	.26	1.98	.39	3.03	. . . .	. . . .	. . . .	. . . .	. . . .
1887	. . . . .	.16	.40	1.42	3.23	1.30	. . . .	3.33	.70	.10	. . . .	. . . .	. . . .
1888	. . . . .	. . . .	.20	2.38	.69	. . . .	1.33	.64	.04	.48	.59	.10	. . . .
1889	. . . . .	.34	.51	1.57	1.40	1.40	.84	1.60	.69	1.62	.72	.16	10.50
1890	. . . . .	.12	.48	2.08	1.71	.58	1.99	.02	.02	.20	.32	trace	8.31
Average . . . .	.34	.35	.41	1.82	1.52	1.09	1.47	2.21	.45	.59	.54	.09	. . . .

## WATER DISTRICT No. 17.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT LAS ANIMAS, FOR PARTS OF THE YEARS 1885 TO 1890, INCLUSIVE. ALTITUDE, 3,889 FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1885 . . . . .	.21	.34	.45	.85	2.88	2.51	1.70	2.12	.60	.64	.31	.85	13.46
1886 . . . . .	.68	.13	.33	2.64	.25	1.19	4.66	1.17	1.23	.20	.23	.07	12.78
1887 . . . . .	.13	.11	.09	2.55	2.92	1.89	1.09	2.35	.63	1.10	.28	.32	13.46
1888 . . . . .	.06	.59	.64	2.59	.58	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
1889 . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	.06	.06	1.08	.11	. . . .	. . . .
1890 . . . . .	.20	.40	. . . .	2.30	1.12	.05	.22	.90	. . . .	.03	. . . .	. . . .	5.22
Average . . . .	.31	.25	.30	2.38	2.14	1.45	1.41	1.32	1.63	.50	.19	.25	. . . .

## WATER DISTRICT No. 17.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT ROCKY FORD, OTERO COUNTY, FOR PARTS OF THE YEARS 1888 TO 1890, INCLUSIVE. ALTITUDE, . . . . . FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888 . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	.53	.30	.01	. . . .
1889 . . . . .	.36	.12	.67	2.12	1.56	.75	4.50	1.48	.26	1.68	.77	.04	14.31
1890 . . . . .	.34	.15	.15	2.97	.29	.77	1.16	.74	.08	. . . .	.30	. . . .	6.95
Average . . .	.35	.14	.41	2.54	.94	.74	2.83	1.08	.17	.74	.46	.02	. . . .

# WATER DISTRICT No. 20.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT MONTE VISTA, FOR PARTS OF THE YEARS 1888 TO 1890. ALTITUDE, 7,665 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888. . . . .	.50	.88	.16	1.46	. . . .	.71	.37	.71	.23	1.15	.35	. . . .	6.51
1889. . . . .	.33	. . . .	.05	.99	.16	.62	1.26	.41	.29	.64	.94	.08	5.72
1890. . . . .	. . . .	.12	.56	2.13	.18	. . . .	1.27	.92	1.30	. . . .	. . . .	.11	6.59
Average . .	.28	.30	.26	1.56	.11	.44	.93	.68	.61	.60	.43	.06	6.28



## WATER DISTRICT No. 28.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT CUNNISON, FOR PARTS OF THE YEARS 1888 TO 1890 INCLUSIVE. ALTITUDE, 7,680 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888 . . . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	3.28	1.17	.13	.73	.26	. . . .	. . . .
1889 . . . . .	.29	.02	.05	3.10	.12	.16	.10	.82	.48	. . . .	3.60	1.28	10.02
1890 . . . . .	. . . .	. . . .	.26	1.70	. . . .	. . . .	. . . .	. . . .	.24	. . . .	. . . .	. . . .	. . . .
Average . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	.28	. . . .	. . . .	. . . .	. . . .

## WATER DISTRICT No. 33.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT FORT LEWIS, FOR THE YEARS 1885 TO 1890, INCLUSIVE. ALTITUDE, 8,500 FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1885	. . . . .	.44	1.04	2.62	.70	1.28	1.52	1.78	.79	.48	1.76	1.26	13.67
1886	3.91	1.45	.88	2.74	.72	.32	. . . . .	3.99	1.62	2.02	1.74	.26	19.65
1887	.15	.52	.40	1.20	.30	1.82	7.54	2.60	2.62	.72	1.74	1.12	20.73
1888	.38	.20	1.40	1.42	.24	.02	1.54	1.14	.42	1.27	1.74	1.19	10.96
1889	1.62	.80	.95	.20	.40	.60	3.26	1.07	.90	2.28	2.05	7.68	21.81
1890	5.20	2.30	1.75	3.13	.10	.45	.96	2.35	1.03	1.49	1.39	. . . . .	. . . . .
Average . .	1.88	.95	1.07	1.89	.41	.75	2.47	2.15	1.23	1.38	1.74	. . . . .	. . . . .



## WATER DISTRICT No. 40.

STATEMENT SHOWING THE TOTAL PRECIPITATION IN RAIN AND MELTED SNOW, AT DELTA, FOR PARTS OF THE YEARS 1888 TO 1890. ALTITUDE, . . . FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888 . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1.79	2.15	.67	. . . . .
1889 . . . . .	.41	.48	.20	.40	.03	. . . . .	.75	.61	1.30	.57	.95	3.15	8.85
1890 . . . . .	.80	.85	.83	.98	.45	.07	.79	1.59	.43	1.42	. . . . .	. . . . .	. . . . .
Average . . . . .	.60	.66	.51	.69	.24	.03	.77	1.10	.58	1.26	. . . . .	. . . . .	. . . . .

## WATER DISTRICT No. 41.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW, AT MONTROSE, FOR THE YEARS 1886 TO 1890, INCLUSIVE. ALTITUDE, 5,780 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886 . . . . .	.79	.13	.49	3.14	.57	.01	.33	1.38	1.06	.95	.54	.50	9.89
1887 . . . . .	.16	.24	.28	1.21	.07	1.34	2.12	1.56	1.56	1.19	1.08	.35	11.16
1888 . . . . .	.45	.38	.60	.42	.84	.05	.51	1.48	.16	1.66	1.74	.21	5.69
1889 . . . . .	.59	.44	.05	.86	.60	.28	.84	.35	.80	.47	.58	1.34	7.20
1890 . . . . .	.80	.78	.56	1.36	.16	.03	.71	1.38	.68	1.41	.58	.65	9.10
Average . . . . .	.56	.39	.40	1.40	.45	.34	.90	1.23	.85	1.14	.90	.61	8.61

## WATER DISTRICT No. 49.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT CHEYENNE WELLS, FOR PARTS OF  
THE YEARS 1889 AND 1890. ALTITUDE, . . . FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1889 . . . . .	. . . .	. . . .	2.30	1.93	1.98	5.10	. . . .	. . . .	. . . .	. . . .	.45	. . . .	. . . .
1890 . . . . .	.10	.25	. . . .	1.95	. . . .	. . . .	2.25	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Average . . . .	. . . .	. . . .	. . . .	1.94	. . . .	. . . .	. . . .	—	. . . .	. . . .	. . . .	. . . .	. . . .



## WATER DISTRICT No. 64.

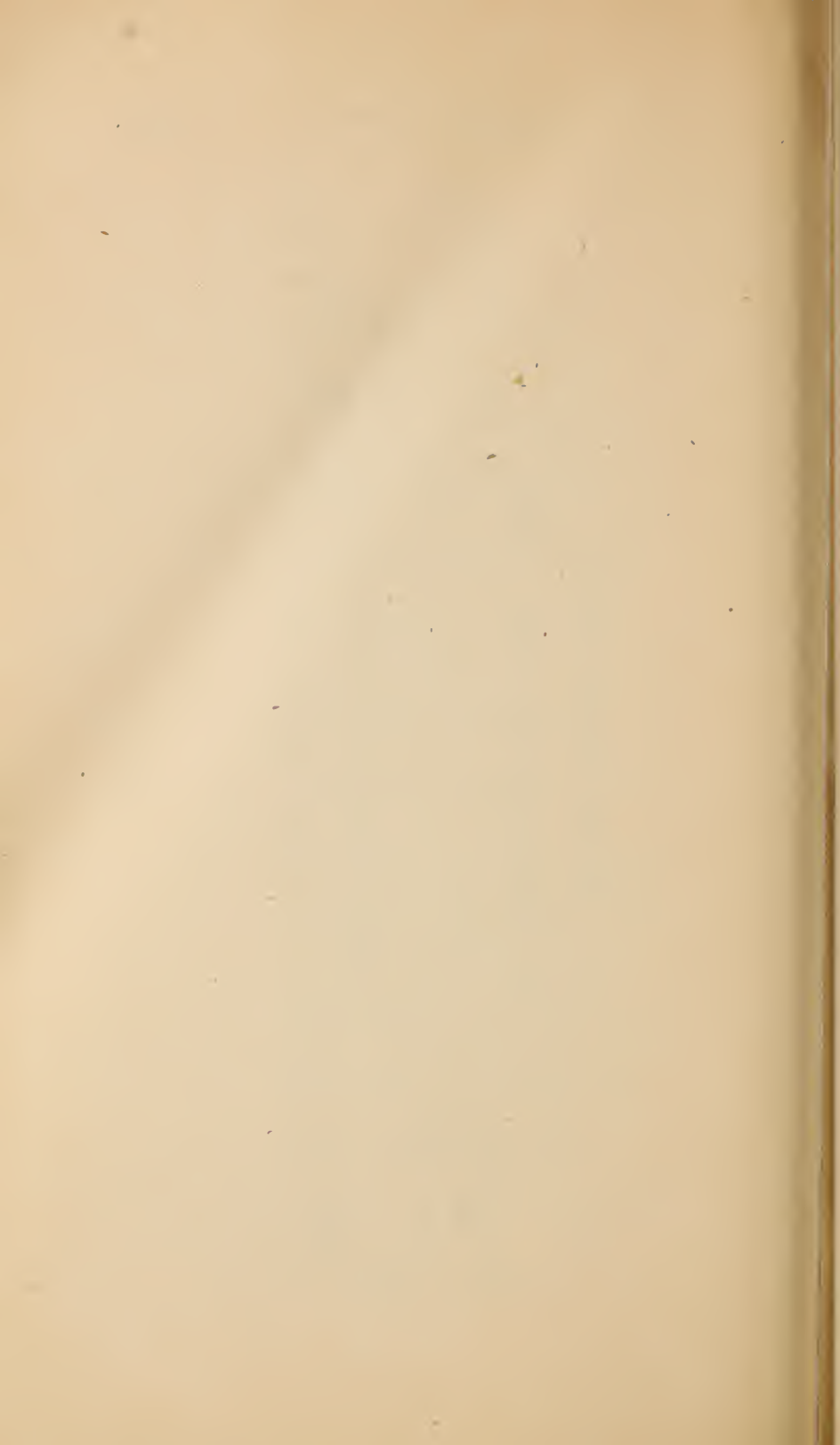
STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT JULESBURG, FOR PARTS OF THE YEARS 1888 TO 1890, INCLUSIVE. ALTITUDE, 3,475 FEET.

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1888 . . . . .	.4	. . . . .	. . . . .	. . . . .	5.81	1.33	1.06	1.64	.10	.56	. . . . .	.02	. . . . .
1889 . . . . .	.08	. . . . .	.72	3.05	2.16	3.90	3.52	1.12	.35	.74	.31	. . . . .	. . . . .
1890 . . . . .	. . . . .	. . . . .	. . . . .	3.07	2.54	1.72	.68	.50	.49	. . . . .	. . . . .	. . . . .	. . . . .
Average . . . . .	. . . . .	. . . . .	. . . . .	3.06	3.50	2.32	1.75	1.09	.31	. . . . .	. . . . .	. . . . .	. . . . .

## WATER DISTRICT No. 67.

STATEMENT SHOWING THE TOTAL PRECIPITATION OF RAIN AND MELTED SNOW AT LAMAR,  
FOR THE YEARS 1889 AND 1890. ALTITUDE, . . . FEET.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1889 . . . . .	.09	.64	.64	3.34	1.77	2.56	2.14	.83	.60	2.39	.40	. . . .	. . . .
1890 . . . . .	.20	.16	.05	2.14	1.02	1.57	1.62	1.63	.33	.37	.05	. . . .	9.14
Average . .	.14	.40	.34	2.74	2.06	1.88	1.23	.46	.46	1.38	.22	. . . .	. . . .



## SEEPAGE WATER.

In October of 1889, and practically at the close of the irrigating season, this department, with the co-operation of E. C. Hawkins, of the U. S. Geological Survey, made a series of measurements along the line of the South Platte and Cache la Poudre rivers, for the purpose of determining, so far as practicable, the quantity of seepage water received and carried by those streams.

In the corresponding month of 1890, similar measurements were made by this department alone, Mr. Hawkins being employed for that purpose, in conjunction with assistant L. R. Hope, of this office.

Careful measurements were made of the discharge at the respective cañons of the rivers, and at stated intervals along their channels; also, of the in-take from the various sources, and the quantities diverted by ditches. Tabulated statements of the results are herein reported, and will be found an interesting study. The points of the greatest accessions from seepage can be located, and the places where losses occur from percolations in the beds of the channels. From the Cache la Poudre statement it will be observed that, while the gauging at the cañon for 1889 gave 68.72 cubic feet per second, as against 80.77 for 1890, the increase from seepage for the entire length of the river, for the two years, was practically the same, being 98.96 and 100.79 cubic feet per second, respectively, although the same sections for the two years do not show such uniformity. This would make the seepage water returned to the river, for 1889, 13 4-10 per cent. of the mean discharge of the river during the irrigating season of four months, and 13 per cent. for 1890.

The measurements on the Platte extend from the cañon to Iliff, and include 71 gaugings of the river, its

tributaries and ditches. From this statement it will be seen that there was an increase from seepage, for 1889, of 422.78 cubic feet per second, and for 1890, of 449.22 cubic feet per second, the two comparing nearly as favorably in uniformity as the Cache la Poudre.

In the year 1889 no loss was shown from the river-bed percolations, until a point was reached some 20 miles below the mouth of the Cache la Poudre, and then, very slight.

In 1890 a loss of 11.95 cubic feet per second, is shown in the river bed near the head of the City Ditch, and about four miles below the cañon. This is probably accounted for by the under-drainage into the galleries and feeders to the pipe line of the Citizens' Water Company, as said pipe line follows the south bank of the river from the cañon to this point, and there crosses under the river bed to the north side, underground laterals branching out in this vicinity, as I am informed, for the collection of seepage waters. The next loss, consisting of 16.54 cubic feet per second, occurs about 37 miles below Denver and above the mouth of the St. Vrain creek, but on the other hand, in the next 17 miles below this point, a remarkable gain is shown of 94 cubic feet per second, from which it would appear that considerable underflow was brought to the surface, possibly by a rise in the bed-rock; and further, that lands irrigated by Big Thomson and Cache la Poudre ditches were draining directly into the Platte. This increase continues for about 25 miles, when a third loss occurs, of 18 cubic feet per second, which is more than made up in the following twelve miles.

From the statement for 1890, on the South Platte, the following results are shown:

Amount of water in river at cañon . . . . .	209.19 sec. ft.
Amount of water from natural tributaries . . . . .	104.43 sec. ft.
Total . . . . .	313.62 sec. ft.
Total amount diverted by ditches . . . . .	762.84 sec. ft.
Amount due to seepage . . . . .	449.22 sec. ft.
Mean discharge of river for 4 irrigating months . . . . .	443 sec. ft.

That seepage water is an important factor in the Platte River system, there can be little doubt from the above figures, and that the loss of water from sinking in the river bed, is not so serious as generally supposed, is also clearly shown.

That the seepage water carried by the river and diverted by the ditches during the month of October, was greater than the mean discharge at the cañon during the four irrigating months, will probably tax the credulity of all who have not been conversant with the facts.



## TABLE OF MEASUREMENTS OF SEEPAGE WATER

IN THE CACHE LA POUFRE RIVER, LARIMER AND WELD COUNTIES, COLORADO, OCTOBER 11 TO 17, 1889.

PLACES WHERE MEASUREMENTS WERE TAKEN	Amount of water in river		Amount of water di- verted from river by canals	Amount of water in river at the points measured, plus that diverted by canals, between those points		Amount of increase in volume of river between points measured		Amount of increase in volume of the river, from the gauging station at cañon to point where meas- ured		Percentage of in- crease in volume, from gauging sta- tion at cañon to point where meas- ured
	Cubic feet per second	Cubic feet per second		Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Per cent.		
Gauging Station at Cañon . . . . .	68.723									
Larimer County Ditch . . . . .			.818							
Pleasant Valley and Lake Canal . . . . .			14.781							
Jackson or Dry Creek Ditch . . . . .			5.288							
Cache la Poudre Ditch . . . . .			6.968							
Taylor & Gill Ditch . . . . .			2.577							
Larimer County Canal No. 2 . . . . .			12.425							
Fort Collins Waterworks . . . . .			.875							
Fort Collins Canal . . . . .			.650							
Larimer & Weld Canal . . . . .			3.040							
Second River Measurement below Dam of Larimer & Weld . . . . .	32.571	79.993				11.270	11.270		11.270	16.4

Howe or Pioneer Ditch . . . . .	1.746	.	.	.	.	.	.	.	.
Josh Ames' Ditch . . . . .	1.378	.	.	.	.	.	.	.	.
Lake Canal . . . . .	1.500	.	.	.	.	.	.	.	.
Fort Collins Irrigation Ditch . . . . .	1.497	.	.	.	.	.	.	.	.
Box Elder Ditch . . . . .	6.555	.	.	.	.	.	.	.	.
Cache la Poudre Canal . . . . .	55.184	.	.	.	.	.	.	.	.
Third River Measurement below Dam of Cache la Poudre Canal	1.500	.	.	.	.	116.782	36.789	48.059	69.9
Whitney Ditch . . . . .	2.285	.	.	.	.	.	.	.	.
B. H. Eaton Ditch . . . . .	.300	.	.	.	.	.	.	.	.
Union Colony Canal No. 3 . . . . .	9.835	.	.	.	.	.	.	.	.
Ogilvy Ditch . . . . .	39.098	.	.	.	.	.	.	.	.
Fourth River Measurement below Dam of Ogilvy Ditch . . . . .	3.460	.	.	.	.	161.280	44.498	92.557	134.7
Fifth River Measurement near junction with Platte River . . . . .	9.887	.	.	.	.	167.687	6.497	98.964	143.8

## TABLE OF MEASUREMENTS OF SEEPAGE WATER

IN THE CACHE LA POUDBRE RIVER, COLORADO, OCTOBER 16 TO 18, 1890.

NAMES OF STREAMS AND DITCHES WHERE MEAS- UREMENTS WERE TAKEN	Amount of water in river		Amount of water di- verted from river by canals		Amount of water in river at points meas- ured, + that divert- ed by canals, and — inflow from natu- ral tributaries		Amount of increase in volume of river between points measured		Amount of increase from the gauging station at cañon to point where last measured		Per cent. of increase in volume from gauging station at cañon to point last measured		REMARKS
	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	
Cache la Poudre river . . . .	80.776												. . . Gauging Station at Cañon
Cañon Canal . . . . .			.975										
Dry Creek Ditch . . . . .			4.125										
Cache la Poudre Irrigat'g Ditch			4.016										
Taylor & Gill Ditch . . . . .			.700										
Larimer County Canal . . . . .			2.849										
Ft. Collins Water Works . . . .			.383										
Larimer and Weld Canal . . . .			16.401										
Cache la Poudre river . . . . .	77.117			106.566			25.790		25.790		31.9		{ Below head of Larimer and Weld Canal.
Riddle Ditch . . . . .			.106										
Josh Ames' Ditch . . . . .			1										

[illegible]

## TABLE OF MEASUREMENTS OF SEEPAGE WATER

IN THE SOUTH PLATTE RIVER, COLORADO, OCTOBER 18 TO 25, 1889.

PLACES WHERE MEASUREMENTS WERE TAKEN	Amount of water in river		Amount of water diverted from river by canals		Amount of inflow from natural trib- utaries		Amount of water in river at points measured, + that diverted by canals, and - the inflow from natural trib- utaries		Amount of increase in volume of river between points measured		Decrease in volume of river between points measured		Amount of increase in volume of the river, from the gauging station at Cañon, to point where measured		Per cent. of increase in volume, from gauging station at Cañon, to point where measured	
	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second	Cubic feet per second
First measurement, gauging station at } Cañon . . . . .	130.825															
Little Grainger ditch . . . . .		4.804														
High Line canal (N. Colo. Irrig. canal) . .		111.962														
Platte Cañon ditch . . . . .		.181														
Last Chance ditch . . . . .		.267														
Deer creek . . . . .				2.612												
Nevada ditch . . . . .		10.466														
City ditch (Platte Water Co.'s canal) . .		9.809														
Plum creek . . . . .				3.331												
Marcy gulch . . . . .				1.341												
Lee gulch . . . . .				9.311												

[illegible]



TABLE OF MEASUREMENTS OF SEEPAGE WATER—Concluded.

PLACES WHERE MEASUREMENTS WERE TAKEN	Amount of water in river		Amount of water diverted from river by canals		Amount of inflow from natural tribu- taries		Amount of water in river at points measured, + that diverted by canals, and — the inflow from natural tribu- taries		Amount of increase in volume of river between points measured		Decrease in volume of river between points measured		Amount of increase in volume of the river, from the gauging station at Canon, to point where measured		Per cent. of increase in volume, from gauging station at Canon, to point where measured	
	Cubic feet per second		Cubic feet per second		Cubic feet per second		Cubic feet per second		Cubic feet per second		Cubic feet per second		Cubic feet per second		Cubic feet per second	
St. Vrain creek . . . . .					18.072											
Big Bend ditch . . . . .			4.180													
Union canal . . . . .			30.975						13.547				146.932			112.3
Seventh river measurement, South Platte, below dam of Union canal . . . . .	6.809															
Big Thompson creek . . . . .					6.600											
Mayfield ditch . . . . .			17.767													
Eighth river measurement, So. Platte, below dam of Mayfield ditch . . . . .	5.183						287.298		9.541				156.473			119.6
Ninth river measurement, So. Platte, at head of Latham ditch . . . . .	45.718						327.833		40.535				197.008			150.6
Cache la Poudre . . . . .					14.830											
Tenth river measurement, So. Platte, at Hoover ditch . . . . .	120.136						387.421		59.588				256.596			196.1
Hardin ditch . . . . .			1.005													
Eleventh river measurement, South Platte, at head of K. & B. ditch . . . . .	139.641						407.931		20.510				277.106			211.8
Small ditch (no name) . . . . .																

Putnam ditch . . . . .	30.905					
Twelfth river measurement, South Platte, at _____	105.769		406.964		.967	276.139
Thirteenth river measurement, South Platte, below Fort Morgan canal . . .	131.932					
Bijou creek . . . . .	3.625		436.752	29.788		305.927
Fourteenth river measurement, South Platte river, at Deuel . . . . .	8.310	3.575	437.862	1.110		307.037
Deuel a Snyder ditch . . . . .	3.567					
Platt & Beaver canal . . . . .	25.023					
Lower Beaver ditch . . . . .	17.487					
Beaver creek . . . . .	7					
Smits's or Island Farm creek . . . .	8.447					
Tetsal ditch . . . . .	2.340					
South Platte ditch . . . . .	24.106					
Pawnee ditch . . . . .	4.367					
South Platte, at Merino . . . . .	8.481		516.370	78.508		355.545
Schneider ditch . . . . .	12.609					
Spring Dale ditch . . . . .	3.583					
Sterling ditch No. 1 . . . . .	10.076					
Lowline ditch . . . . .	1.796					
Smith & Henderson . . . . .	6.833					
South Platte, at Sterling . . . . .	6.378		549.164	32.794		41.339
Sterling ditch No. 2 . . . . .	1.946					
Arnette Ditch . . . . .	8.871					
South Platte, near Iliff . . . . .			553.603	4.439		422.778
						323.1



[illegible]

TABLE OF MEASUREMENTS OF SEEPAGE WATER—Concluded.

NAMES OF STREAMS AND DITCHES WHERE MEASUREMENTS WERE TAKEN	Amount of water in river	Amount of water di- verted from river by canals	Amount of inflow from natural trib- utaries	Amount of water in river at points meas- ured + that diverted by canals and — the inflow from natural tributaries	Amount of increase in volume of points between points measured	Decrease in volume of river between points measured	Amount of increase in volume of river from the gauging station, at Cañon, to point where last gauged	Per cent. of increase in volume from gauging station at Cañon, to point last measured	Amount of increase points measured per mile between	REMARKS
Union Ditch . . . . .	. . . . .	33.792	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Godfrey or Sec. No. 3 Ditch . . . . .	. . . . .	16.467	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Big Thompson Creek . . . . .	. . . . .	. . . . .	23.788	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Latham Ditch . . . . .	. . . . .	64.741	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
South Platte River . . . . .	26.504	. . . . .	. . . . .	386.102	21.104	. . . . .	176.912	84.5	11.5 M = 1.835	. . . Below Latham Ditch
Plum Ditch . . . . .	. . . . .	1.352	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
South Platte River . . . . .	98.458	. . . . .	. . . . .	459.388	73.286	. . . . .	230.198	119.6	6 M = 12.214	{ Above mouth of Cache la Poudre
Box Elder Creek . . . . .	. . . . .	. . . . .	23.524	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hardin Ditch . . . . .	. . . . .	10.279	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
South Platte River . . . . .	213.174	. . . . .	. . . . .	560.861	101.471	. . . . .	351.669	168.1	9 M = 11.274	. . . Below Hardin Ditch
Bijou Canal . . . . .	. . . . .	21.424	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Winkle Ditch . . . . .	. . . . .	2.220	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Putnam Ditch . . . . .	. . . . .	6.581	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
South Platte River . . . . .	164.881	. . . . .	. . . . .	542.793	. . . . .	18.068	333.601	159.4	{ 11 M loss of 1.642	. . . Below Putnam Ditch



## STATE ENGINEER.

573

Weldon Valley Ditch . . .	31.674	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	156.403	. . .	. . .	565.989	23.196	. . .	. . .	356.797	170.5
Fort Morgan Canal . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	45.931	. . .	. . .	569.779	3.790	. . .	. . .	360.587	172.3
Small gulch (no name). .	. . .	. . .	7.421	. . .	. . .	. . .	. . .	. . .	. . .
Bijou Creek . . .	. . .	. . .	2.028	. . .	. . .	. . .	. . .	. . .	. . .
Platte and Beaver Canal .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	25.215	. . .	. . .	576.288	6.509	. . .	. . .	367.096	175.5
Lower Beaver Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Smith Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	12.950	. . .	. . .	593.377	12.089	. . .	. . .	384.185	183.6
Tetsel Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Pawnee Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	8.444	. . .	. . .	614.663	21.286	. . .	. . .	405.471	193.8
Snider Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Springdale Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Smith & Henderson Ditch	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	11.933	. . .	. . .	644.353	29.692	. . .	. . .	435.163	208
Sterling Ditch No. 2 . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Arnett Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Midline Ditch . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
South Platte River . . .	3.647	. . .	. . .	658.408	14.053	. . .	. . .	449.218	214.7



**IRRIGATION STATISTICS.**

---

In response to a very general inquiry relative to the aggregate of lands irrigated, lands under ditch and length of ditches in the State, this department has, at considerable expense of time and labor, compiled such data from official and other sources as will, as nearly as practicable, give the information desired. In determining the quantities in each of the above cases the data have been acquired—first, from the reports of Water Commissioners, where such data are therein furnished; second, from the filings of plats and statements in this office, deducting in all cases those ditches wherein it was known that construction had not taken place; and, third, from personal interviews with responsible parties familiar with remote localities, where Water Commissioners have not been appointed or have not reported the information desired.

In all cases, where exact figures were not obtainable, it has been the practice to adopt conservative estimates, and it is believed the general aggregates will fall below rather than above the true figures.

The results are given by divisions, as showing the totals, in connection with each general drainage basin represented by the six divisions.

## STATEMENT SHOWING BY DIVISIONS

THE NUMBER OF INDIVIDUAL DITCHES FOR WHICH DECREES HAVE BEEN ISSUED, FOR WHICH FILINGS HAVE BEEN MADE IN THE STATE ENGINEER'S OFFICE; THE NUMBER EMBRACED IN THIS STATEMENT OF MILEAGE, THE AGGREGATE LENGTH OF SAID DITCHES; TOGETHER WITH THE AREA IN ACRES CAPABLE OF BEING IRRIGATED AND ACTUALLY IRRIGATED THEREFROM; COMPILED FROM THE DECREES, THE FILINGS AND THE REPORTS OF THE WATER COMMISSIONERS OF THE SEVERAL DISTRICTS.

DIVISION		NUMBER OF DITCHES			TOTAL LENGTH OF SUCH DITCHES	AREA UNDER DITCH IN ACRES	AREA IRRIGATED IN ACRES	REMARKS
NAME	No.	Decreed in Division	Filed 1887-1890	Embraced in this Statement				
South Platte, including the North Park.	1	716	469	1,241	3,851.92	1,127,000	743,372	
Arkansas . . . . .	2	524	287	1,129	2,748.84	1,278,627	220,128	
Rio Grande . . . . .	3		424	522	1,783.81	1,184,744	293,943	
San Juan . . . . .	4		21	21	67.69	158,021	43,848	
Grande River . . . . .	5	433	566	1,081	2,182.24	245,398	158,294	
Green River . . . . .	6		233	317	518.40	88,948	85,000	
Total in State . . . . .		1,673	2,040	4,311	11,052.90	4,082,738	1,544,585	

TABLE

SHOWING THE CAPACITIES OF CHAMBERS' LAKE FOR EACH FOOT IN DEPTH FROM SURVEYS AND MEASUREMENTS MADE BY L. R. HOPE, OF THIS DEPARTMENT, AND PROF. L. G. CARPENTER, OF THE AGRICULTURAL COLLEGE:

Depth	Acre Feet	Cubic Feet	Depth	Acre Feet	Cubic Feet
1	113,591	4,948,023.96	9	165,282	7,199,683.92
2	119,485	5,204,766.60	10	172,376	7,508,698.56
3	125,850	5,482,026.00	11	179,618	7,824,160.08
4	132,050	5,752,098.00	12	187,010	8,146,155.60
5	138,398	6,028,616.88	13	194,551	8,474,641.56
6	144,895	6,311,626.20	14	202,241	8,809,617.96
7	151,541	6,601,125.96	15	210,084	9,151,259.04
8	158,337	6,897,159.72	16	218,068	9,499,042.08
Total capacity . . . . .					113,840,812.10

## EXPENDITURES

FROM THE STATE ENGINEER'S ASSISTANTS' AND MATERIAL FUND,  
FROM JANUARY 1, 1889, TO JANUARY 1, 1891.

Appropriation for salaries for assistants and material for the years 1889-1890 . . . . .		\$9,000 00
J. S. Titcomb, Deputy State Engineer, salary . . . . .	\$2,778 00	
J. S. Titcomb, Deputy State Engineer, traveling expenses . . . . .	78 10	
L. R. Hope, Assistant, for gauging streams and ditches . . . . .	1,952 30	
L. R. Hope, Assistant, traveling expenses . . . . .	485 62	
E. C. Hawkins, Assistant to J. S. Greene and to present incumbent . . . . .	301 30	
G. B. Hooker, Assistant to J. S. Greene . . . . .	187 50	
C. L. Persons, Assistant to J. S. Greene . . . . .	25 00	
J. Opperman, Assistant to J. S. Greene . . . . .	29 50	
C. M. Woodman, Assistant to J. S. Greene . . . . .	36 80	
F. N. Dove, Draftsman (three months) . . . . .	112 00	
I. H. Batchellor, Clerk . . . . .	125 00	
C. W. Comstock, Draftsman . . . . .	186 00	
F. S. Watkins, Draftsman . . . . .	42 00	
John Titcomb, Second Computer . . . . .	10 00	
Denver Phonograph Exchange, <i>et al.</i> , typewriting . . . . .	161 85	
Observer at Cache la Poudre Gauging Station No. 1 . . . . .	58 50	
Observer at South Platte Gauging Station No. 3 . . . . .	74 60	
Observer at Clear Creek Gauging Station No. 4 . . . . .	39 80	
Observer at St. Vrain Gauging Station No. 5 . . . . .	114 20	
Observer at Bear Creek Gauging Station No. 6 . . . . .	43 45	
Observer at Boulder Gauging Station No. 7 . . . . .	125 00	
Observer at Big Thompson Gauging Station No. 8 . . . . .	47 05	
Observer at South Boulder Gauging Station No. 9 . . . . .	56 58	
Observer at Uncompahgre Gauging Station No. 1 . . . . .	15 00	
Expense of new station on Boulder Creek . . . . .	69 40	
Expense of new station on Uncompahgre . . . . .	105 50	
Expense of new station on Cache la Poudre, by J. S. Greene . . . . .	164 15	
Rubber boots, filing boxes, etc . . . . .	57 40	
New current meter . . . . .	98 00	
Balance on hand January 1, 1891 . . . . .	1,425 60	
Totals . . . . .	\$9,000 00	\$9,000 00

Of the above amount, \$678.85 was expended by the former incumbent of this office for assistants from January 1, 1889, to April 10, and for the construction of the gauging station on the Cache la Poudre river. The only available current meter for determining velocities in ditches and streams, owned by this department, became so worn from constant service, as to be entirely valueless and beyond repair, whereupon application was made to the Secretary of State for a new meter, but there being no funds available for that purpose, and the demand for one being imperative, the instrument was purchased at a cost of \$98.00, and paid for from the State Engineer's Assistants fund.

At least two new additional improved meters should be furnished the office, as during the irrigating season there are simultaneous demands for ditch ratings in different parts of the State, and such ratings are essential to the proper distribution of water. But a small proportion of the applications during the past season could receive attention for the want of instruments.

---

#### RECOMMENDATIONS.

---

An intelligent execution of the laws relating to irrigation, depends upon a clear definition of the purpose for which the water of the State may be used, the rights of diversion for those purposes, and the relative rights of appropriators as between the main stream of a Division and its several tributaries, also upon reliable information as to the water supply, and proper facilities for distribution.

Legislation should tend toward these ends, also toward a more equitable distribution among consumers, and a more economical use and conservation of water.

*First*—What constitutes "domestic purposes" should be clearly defined, and the extent, if any, to which water



may be diverted from the natural streams for that purpose.

*Second*—Is water for general stock purposes a beneficial use within the meaning and intent of the Constitution, and if so, does it come under the head of "domestic use," "irrigation," "manufacturing" or "any other purpose?"

*Third*—It is held by the District Court, in the case of "The Farmers' High Line *versus* State Engineer *et al.*," referred to under the head of injunctions, that the distribution of the waters in accordance with the priorities in the Division, under the adjudications had, is unconstitutional. An immediate confirmation or reversal of this decision should be obtained from the Supreme Court, and such legislation had as will remedy the defect, if any, in the law. The officers of this Department are enjoined from closing the head-gates of certain ditches on Clear creek and Big Thompson creek for the benefit of older priorities on the Platte river, and unless relief is afforded by the Supreme Court or the Legislature before another irrigating season, similar restraining orders will be obtained for the other tributaries of the Platte, and priorities can be enforced only as between the ditches in the same district.

This will lead to serious litigation among ditch owners, and demoralizing complications in this department, which it is very important to avoid in the interest of irrigation generally.

*Fourth*—Provision should be made whereby the consumer of water, who has a reservoir on his land can store, at stated periods the water to which he is entitled, during the irrigating season, when its more economical and efficient use can be thereby secured.

It is frequently the case that the quantity of water to which a consumer is entitled is too small for rapid and effective spreading over the land, and again, night irrigation is attended with great loss on the average uneven



lands, because it is necessarily permitted to run without regulation throughout the night.

If the water could be stored during the night, or for a period of 24 or 48 hours, a double flow could be thereby obtained and much more effective service secured without injury to others.

The present law provides for the storage of "any unappropriated water, not needed for immediate use, for domestic or irrigation purposes."

An exercise of discretionary power on the part of the State Engineer, in cases referred to above, results in complaints by owners of subsequent priorities that water is being stored while they are deprived of it for immediate use.

With proper police supervision of the lines of ditches, such permission could be granted with safety, but without it, the department would have no knowledge of the extent to which water was being stored.

*Fifth*—Provision should be made for the establishment and maintenance of permanent and accurate gauging stations at the cañons of all the principal streams on the eastern slope and elsewhere, as necessity requires, with improved registers for each station; also, such telephone communication as will give the Water Commissioner and Superintendent of Division daily information of the stage of water. The gaugings of the streams have little value unless reasonably accurate, and this is impossible when the cross-section is modified by each variation in the flow of water. The daily discharge should be furnished the Water Commissioner in time to regulate the distribution in accordance therewith. This is impracticable in a majority of cases, without some more rapid method of transmission.

*Sixth*—The penalty for failure to construct and maintain suitable headgates and rating flumes in ditches, after due notice, should be cutting off the supply until

compliance is made. The head-gate is necessary to regulate and control the intake, and the rating flume to determine the quantity, and both are essential to an equitable distribution of water. The present law imposes the unjust burden on the Water Commissioner of paying for a head-gate and the costs of a suit to collect, which few are able or willing to assume.

*Seventh*—The responsibility should rest with the owners of the ditches to see that head-gates are not tampered with when shut down or regulated by the Water Commissioner.

The present law provides that locks shall be placed on head-gates by the owners, but in case of failure so to do, after notice, the Water Commissioner shall then provide the lock and collect by suit, as in case of head-gates. Locks are frequently broken and gates raised during the night, and water thus surreptitiously diverted for a day or two before the Commissioner has notice. This results in little or no benefit to the consumers under the line of the ditch so taken, and seriously damages those who are using the water by suddenly cutting off the supply in the midst of irrigation, besides occupying a large proportion of the time of the Commissioner in traversing his District to re-regulate. For this the owner should be held accountable.

*Eighth*—There should be some police regulation of the distribution of water among consumers along the lines of ditches, either by legal district organization or through this department.

After the waters of the streams are diverted into the ditches, the Water Commissioner has no further control over them. Complaints come from all parts of the State of unfair distribution, excessive waste, and unlawful uses, for the regulation of which there should be an authorized State or District supervision.

*Ninth*—Authorized official measurements should be

made of the maximum carrying capacity of all decreed ditches in the State, and an adjustment of decrees to such measurements.

It is notorious that, in a majority of cases, the decrees are in excess of such capacities, and, in some instances, enlargements have been made to secure the full benefit of the decrees. Had such measurements been made the basis of all adjudications, many of the serious complications of to-day would have been avoided. It would seem that the experience of older districts should have suggested this precautionary measure in recent adjudications, but such does not seem to have been the case, as ratings made of some of the ditches indicate a gross disparity between the decrees and capacities, notably in South Park Ditches, in the tabulated statement of the decrees of which a comparison can be made, in the cases of ditches rated by this department.

*Tenth*—The present law provides that "the State Engineer shall approve the designs and plans for the construction and repair of all dams or reservoir embankments, which are built within the State, which equal or exceed ten feet in vertical height."

This imposes a grave responsibility upon the State Engineer, and affords little or no protection to life or property.

General plans or designs are very meagre data with which to figure a factor of safety.

The character and quality of the material and nature of the foundation and abutting ends, the drainage area tributary to the reservoir site, the location and extent of the spillways, and many other details which can only be ascertained by a careful inspection of the ground, are necessary to determine the question of security. The approval of plans should be coupled with authority to inspect the manner of construction, for in the latter will generally be found the defects that bring disaster.

Where competent engineers have charge of the construction of dams, there is little occasion for approval of plans or examination of the works on the part of the State, but in many cases rough designs were presented that are wanting in every element necessary for intelligent consideration. In others, general descriptions, without plans, are forwarded, and suggestions solicited from the State Engineer as to "what he thought about it."

While every encouragement should be given to enterprises looking to the conservation of the waters of the State, and that, too, without excessive burdens to the promoters, in the shape of extra costs, a feeling of security to those whose lives and property may be jeopardized thereby should be afforded by some uniform and thorough system of inspection by an authorized and competent Commission.



## Report on State Bridges, Roads

AND OTHER IMPROVEMENTS,

FROM THE INTERNAL IMPROVEMENT AND INCOME FUNDS.

---

*To His Excellency,*

JOB A. COOPER,

*Governor of Colorado.*

SIR:—As Secretary and member of the various Commissions provided by the Seventh General Assembly for the construction of certain State bridges, wagon roads and other improvements, I have the honor to report the following as the result of compliance by the respective Commissions, with the provisions of the several acts:•

### BENNETT CREEK AND CONEJOS WAGON ROAD.

House bill No. 283 appropriated \$7,500 for the construction of a wagon road from the head of Bennett creek, in Rio Grande county, to the Conejos mining camp, in Conejos county, and constituted as the Building Board the State Engineer and the chairman of County Commissioners of Rio Grande county (Henry M. Dyer) and chairman of County Commissioners of Conejos county (B. Romero).

Section 2 of said act provides the road shall be "built upon a grade not to exceed 13 feet in 100, and with no curvatures less than 20 feet in a hundred," whatever that may mean.

Upon a personal inspection of the ground I found that from the head of Bennett creek the line would pass over a high divide, at an elevation of 10,000 feet; thence down a steep mountain side into the cañon of the Rio Alamoso; thence up said stream some 8 miles and over another high divide, to Conejos camp, making the

entire distance some 30 miles; and that to bring the grade within the limits prescribed by the act would require a careful survey of the line. J. M. Gardner, of Del Norte, was employed for this purpose, and upon completion of work submitted his field-notes of same.

Calls were then made for bids with the following results:

Daniel W. Hoover . . . . .	\$ 6,300 00
P. P. Ford . . . . .	6,500 00

The award was made to Daniel W. Hoover, as being the lowest responsible bidder, and upon notice of the completion the Board met at Del Norte, December 12, 1889, for final action.

Satisfactory evidence being adduced that the terms of the contract had been complied with, the road was accepted and voucher ordered drawn for the contract price.

## STATEMENT OF ACCOUNT.

Appropriation . . . . .		\$ 7,500 00
Engineer and men for survey . . . . .	\$ 589 20	
Supplies for same . . . . .	112 11	
Superintendence and team hire . . . . .	91 50	
State Engineer expense, two trips . . . . .	61 15	
D. W. Hoover account, contract . . . . .	6,300 00	
		7,163 76
Balance on hand . . . . .		\$ 336 04

Detailed statements and vouchers for the above were duly filed with the Auditor of State.

### TRINIDAD AND STONEWALL WAGON-ROAD.

Senate bill No. 311 appropriated \$15,000 to aid the county of Las Animas in constructing a wagon-road from Trinidad to Stonewall, in said county, and constituted as the Building Board, the Governor of the State, the State Engineer, and the Chairman of the Board of



County Commissioners of Las Animas county ( Vivian Abeyta ).

At a meeting of the Board held June 1, 1889, the State Engineer was instructed to cause a survey to be made of the most favorable line between the two points, preparatory to an inspection by the Board.

Pursuant to this order, I employed J. L. Frankenger, of Trinidad, as engineer in charge, and with him, made a general examination of the ground. This was followed by a careful locating survey, the maps and profiles of which are now on file in this office.

The Board subsequently examined and approved the line located, and calls were made for bids, in accordance with plans and specifications, the notice being inserted in three different newspapers of the State for thirty consecutive days, as required by the act.

H. E. Mulnix, of Trinidad, being the lowest and only bidder, was awarded the contract at \$13,987, the amount bid.

Notice of completion having been served, inspection of the road was made April 10, 1890, by the Chairman of the Board of County Commissioners of Las Animas county and the State Engineer.

The road was found to be constructed in accordance with the contract and specifications, having ten feet in width of solid road-bed, with proper turnouts and drainage trenches.

The bridges, some forty in number, were exceptionally strong and durable, having pile foundations, well driven, and ample water-ways. Three across the Purgatoire river were each one hundred feet long, being fifty feet truss-spans; two were fifty feet each, also trusses; six were thirty-six feet each, and thirty were eighteen feet each, all provided with substantial guard rails.

The road, by measurement, is 29 28-33 miles in length. The right-of-way was procured by the county

of Las Animas, and the State appropriation was supplemented by that county, by special arrangement with the contractor, as the cost of construction exceeded the State limit.

Complete maps and profiles of the line are on file in this office, copies of which have been furnished the county of Las Animas.

## STATEMENT OF ACCOUNT.

Appropriation. . . . .	. . . . .	\$ 15,000 00
For surveys. . . . .	\$ 592 45	
Superintendence. . . . .	200 00	
Advertising. . . . .	63 40	
Expense—four trips by State Engineer. . . . .	111 45	
F. N. Dove, office work. . . . .	12 00	
H. E. Mulnix, account contract. . . . .	13,987 00	
		\$ 14,966 30
Balance fund on hand. . . . .	. . . . .	\$ 33 70

## TEN MILE RIVER BRIDGE.

House bill No. 199 provided for the construction of a State bridge across Ten Mile river, near the town of Dillon, in Summit county, and appropriates \$2,000 therefor.

The State Engineer and the Chairman of Board of County Commissioners of Summit county (Robert W. Foote) are made a Board for the purpose of locating and constructing such bridge.

November 21, 1889, the Board made personal inspection of the ground, and selected a site about one-quarter mile up the river from Dillon, on the line of a county road.

Under the law, the Board was required to advertise for and secure plans and specifications for the construction, and then advertise for bids, in accordance therewith.

The plan adopted called for a 1-84 foot span combination truss, wood and iron, with a 14-foot clear roadway.

The wood to be of the best, native Red Spruce. All iron and all wood work, above the floor, to have two coats of mineral paint, and the abutments to be of stone.

The contract was awarded to Ernest Campbell, of Breckenridge, for \$1,490, he being the lowest bidder.

April 23, 1890, the Board made an inspection of the bridge as completed, and found the same in accordance with the specifications, the work having been done in a satisfactory manner, whereupon the bridge was received and certificates issued to that effect.

Plans and specifications of the bridge are on file in this office.

## STATEMENT OF ACCOUNT.

Appropriation . . . . .		\$ 2,000 00
S. C. Whipple, for survey . . . . .	\$ 26 40	
H. C. Jennings, for plans . . . . .	50 00	
H. L. Aulls, for blue prints . . . . .	4 50	
Ada Dwelle, copying specifications and bond . . . . .	2 65	
Advertising . . . . .	66 50	
Robert W. Foote, for superintendence . . . . .	83 40	
Expense State Engineer, two trips to Dillon . . . . .	35 40	
Ernest Campbell, account contract . . . . .	1,490 00	
		\$ 1,758 85
Balance fund on hand . . . . .		\$ 241 15

## GRAND RIVER BRIDGE.

House Bill No. 49 provides for the construction of a State bridge across Grand river, at or near the mouth of Cottonwood creek, in Eagle county, and appropriates \$6,000 therefor.

The State Engineer, with the Chairman of the Board of County Commissioners of Eagle county (H. W.

Goodrich, R. F. Stratton), and the Chairman of the Board of County Commissioners of Routt county (S. H. Tharp, J. B. Insley), were made a Board for the purpose of locating and constructing such bridge.

Pursuant to notice, the Board met, on Grand river, at the mouth of Cottonwood creek, for the purpose of selecting a proper site, and after an examination of the river, above and below, determined upon the place known as McCoy's Ferry, where the wagon road leading from Eagle river to Egeria Park, crosses said river.

J. C. Kennedy, civil engineer, was employed to make a survey, and careful soundings of the river, at this point.

A subsequent examination of the wagon road, leading from Eagle river to McCoy's Ferry, satisfied the Board that it was impracticable for heavily loaded teams, on account of excessive grades, and that consequently it would be injudicious to construct the bridge on its line, if a more practicable route could be obtained.

The two counties therefor, by joint action, caused surveys to be made, and selected a route crossing the river some seven miles above the McCoy Ferry, near the mouth of Goodson creek, thereby securing very favorable grades without materially increasing the distance.

After satisfactory assurances from the Commissioners of the respective counties that the road would be built without unnecessary delay, the Board relocated the bridge at this point, and Preston King, civil engineer, was employed to make the necessary surveys and soundings.

Plans were then called for and adopted, as provided by the act, but all bids for construction under the plans, being in excess of the appropriation, were rejected, and a new call was made for bids to be accompanied by plans, in each case. Under this call seven bids were received and the award was made to the Missouri Valley



Bridge & Iron Works, of Leavenworth, Kansas, at \$5,190. The plans submitted provide for a combination truss (wood and iron) bridge consisting of two spans 100 feet each, with a 14-foot roadway; the structural parts of the truss to be of Oregon pine, and all other wood to be of best native lumber. The abutments and pier to be of stone, laid up in cement mortar.

Notice having been received that the bridge was completed, on October 9, 1890, I made an inspection of the same, being assisted therein by R. F. Stratton, Chairman of Eagle County Commissioners, and Theo. Rosenberg, engineer in charge. The structure was found to be substantially in compliance with the contract, and was accepted by the Board.

## STATEMENT OF ACCOUNT.

Appropriation . . . . .		\$ 6,000 00
H. W. Goodrich, for service on commission . . . . .	\$ 79 20	
S. H. Thorp, for service on commission . . . . .	117 00	
J. C. Kennedy, for surveys at McCoy's crossing . . . . .	36 20	
C. H. McCoy, for ferry service, taking soundings, etc. .	59 25	
Preston King, for surveys at new site . . . . .	69 50	
Advertising . . . . .	92 75	
Theo. Rosenberg, for superintendence . . . . .	180 30	
J. P. Maxwell, for expense, three trips, location and inspection . . . . .	93 60	
Missouri Valley Bridge & Iron Works, account contract .	5,190 00	
		5,917 90
Balance on hand . . . . .		\$ 82 10

**CLEAR CREEK COUNTY ROAD, TRAIL RUN AND  
UTE CREEK WAGON ROAD.**

House Bill No. 310 provides for the construction of a wagon road in Clear Creek county, from a point near the mouth of Trail Run, by way of the smelter and the Ouida mine and Ute creek, to or near the Argo mine and to intersection with the County Road.

The Governor, the State Engineer, and the Chairman of the Board of County Commissioners, of Clear

Creek county, are made a Board for the purpose of constructing said road.

By the terms of the act, the grade of said road is not to exceed thirteen feet to the one hundred, and with no curvatures of *less than twenty feet to the hundred*; the width to be not less than twelve feet solid road-bed.

I made an inspection of the route, and, from the mountainous nature of the country, became satisfied that a careful survey would be necessary to meet the requirements of the act, as to grades, and that the cost of construction would probably exceed the appropriation.

George Marsh, a civil engineer of Georgetown, was employed for that purpose, and made the survey, whereupon a call was made for bids until the fifteenth day of October, 1889, publication having been made in Denver, Georgetown and Idaho Springs papers.

No bids having been received under the call, no further action has been taken.

## STATEMENT OF EXPENDITURES.

Appropriation . . . . .		\$ 5,000 00
To George Marsh, expense of survey . . . . .	\$ 445 75	
To advertising (three papers) . . . . .	23 55	
To State Engineer, expense, inspection of route . . . . .	6 60	
		475 90
Balance on hand . . . . .		\$ 4,524 10

## GRAND RIVER BRIDGE AND ROAD.

House Bill No. 57 provides for the construction of a State road through the cañon of the Grand river, below and from the town of Hot Sulphur Springs to the mouth of said cañon, and further provides for the construction of a bridge across Grand river at the mouth of said cañon, and appropriates \$10,000 therefor.

The Governor, the State Engineer, and the chairman



of the Board of County Commissioners of Grand county constitute the Board of Construction.

I made an examination of this cañon in July of 1889, and found some serious obstacles in the shape of high precipitous ledges, with their bases at the waters' edge, contracting the water way to narrow limits, for a considerable distance, in the lower part of the cañon. In other places the mountain sides were steep and broken by sharp cliffs alternating up and down the mountain side, and rendering it difficult to obtain an economical high or low line; also, making the work of a careful survey slow and somewhat expensive.

George S. Oliver, civil engineer, was employed to run the line and locate the site of bridge, after which work was performed, estimates were made of the cost of construction, from which it appeared that a practicable road could not be obtained within the limits of the appropriation, and it was not deemed advisable to prosecute the business further, and thereby incur additional expense.

Subsequently, however, assurances were given by interested parties, that a bid would be made within the limit, if certain modifications in the line were permitted. This was acceded to, and plans were called for for two bridges, one at the lower end of the cañon, and the other in the cañon, for the purpose of using both sides of the river, if necessary, in the building of the road.

Upon the adoption of the proper plans, bids were called for to construct the road and bridge or bridges, giving the contractor a choice of routes.

One conditional bid was received, but subsequently, on further examination of the cañon, the bidder asked to withdraw the same, and his request was granted.

That such a road is much needed, there can be little question, both for local and through travel, as the pres-

ent road over the mountain is impracticable for heavily loaded teams.

## STATEMENT OF EXPENDITURES.

Appropriation . . . . .		\$ 10,000 00
George S. Oliver, account survey . . . . .	\$ 360 83	
Advertising . . . . .	77 70	
H. C. Jennings, two sets plans for bridges . . . . .	100 00	
State Engineer, expense of two trips for examination . . . . .	48 65	
		587 18
Balance unexpended . . . . .		\$ 9,412 82

## DEL NORTE LEVEE.

House bill No. 189 provides for the construction of levees and rip-rapping to protect State bridge at Del Norte, Rio Grande county, Colorado, and appropriates \$2,000 therefor.

The Governor, State Engineer and the Chairman of Board of County Commissioners of Rio Grande county, are constituted a Board for the purpose of building the same.

From an examination and survey of the ground, it was determined that 792 feet of embankment and rip-rapping would be required to protect the State bridge as located by the Commission, and 623 feet additional for the protection of the low lands to the south of bridge, the latter to be constructed by the town of Del Norte. The plans called for an embankment, with crest  $5\frac{1}{2}$  feet above low water line, and 5 feet in width, on top-outer slope,  $1\frac{1}{2}$  to 1, and inner slope, 1 to 1 well rip-rapped.

Pursuant to notice, proposals were received, and the award made to Carey, Adams & Company of Del Norte, for \$975, they being the lowest bidders, the highest bid being \$1,450.

Inspection of work was made May 5, 1890, and having been found in accordance with the contract, it was accepted and certificate ordered issued.

## STATEMENT OF EXPENDITURES.

Appropriation . . . . .		\$ 2,000 00
George S. Oliver, for survey, maps and profile . . . .	\$ 58 87	
Advertising . . . . .	29 20	
W. H. Cochran, superintendence . . . . .	50 00	
State Engineer, expense for inspection . . . . .	15 15	
Carey, Adams & Co., contractors . . . . .	975 00	
		1,128 22
Balance unexpended . . . . .		\$ 871 78

## DEL NORTE BRIDGE.

House Bill No. 189 also provides for the construction of a State bridge across the Rio Grande at Del Norte, Colorado, said bridge to be built at or near the point where the line of Columbia avenue would cross said river, and \$7,000 was appropriated therefor.

The Governor, the State Engineer and the Chairman of the Board of County Commissioners of Rio Grande county are constituted a Board for the purpose of constructing said bridge.

George Nickel, civil engineer, was employed to make meanders of the river banks and slough and furnish a map of said survey, showing also the street crossings. From said map and from personal examination of the ground, it became apparent to the Board that it would be impracticable to build the bridge on Columbia avenue within the limits of the appropriation, and the crossing of Oak street, two blocks east, was finally selected as the most economical location, as well as the most desirable for the traveling public.

Plans were submitted pursuant to call, and a combination truss selected, consisting of two spans 100 feet and 117 feet, respectively, with roadway 16 feet in the clear; the abutments and pier to be of the best stone to be found in the neighborhood.

Under the call for bids, eight were received, and the award was made to the Bullen Bridge Co., of Trinidad, for the sum of \$3,687, this being the lowest bid.

After the material for the sub-structure was delivered on the ground, I made an examination of the stone, and found it unsuitable for the purpose on account of its great absorptive qualities when brought in contact with water, and its consequent liability to crumble under pressure. It being the best stone to be found in that section of country, the Board was under the necessity of arranging with the contractor for more suitable material. The most available stone, satisfactory in quality, was from the Amargo quarries, in New Mexico.

An arrangement was made with the contractor by which 20 car-loads of this stone was to be furnished, to be used in the pier and below high-water line in abutments, in consideration of which an additional payment of \$1,500 was to be made.

There have been many vexatious delays in connection with the work; first, in securing proper stone, and, second, as is claimed by the contractor, on account of high-water, but the structure, as completed, is a very creditable piece of work, and gives full value for the money expended.

## STATEMENT OF EXPENSE.

Appropriation . . . . .	.....	\$ 7,000 00
George D. Nickel, account survey and maps of river. .	\$ 79 51	
Stallard & Oliver, levels and lines for bridge . . . .	57 18	
Advertising for plans and bids . . . . .	45 70	
Typewriting specifications, etc . . . . .	2 55	
State Engineer, expense two trips for inspection and two telegrams . . . . .	14 00	
W. H. Cochran, superintendence and levels . . . . .	157 50	
State Engineer, expenses final inspection . . . . .	15 50	
Bullen Bridge Company, account contract . . . . .	5,187 00	
		5,558 94
Balance unexpended . . . . .	.....	\$ 1,441 06



**SOUTH BOULDER CREEK CANAL FOR DIVERSION  
OF WATERS.**

---

House bill No. 161 provides for a survey and for the construction of a canal along the western slope of the range for a distance of twenty miles, more or less, and to cut across the range and connect with South Boulder creek, for the purpose of increasing the supply of water in said South Boulder creek, and appropriates \$25,000 therefor.

The Board of County Commissioners of Boulder county and the State Engineer are constituted a board for the purpose of making said survey and locating and constructing said canal.

Pursuant to notice, a meeting of the Board was held at Boulder, July 18, 1889, at which time George S. Oliver, civil engineer, was employed to procure the necessary assistants and equipments, and make the required survey, under the direction of the State Engineer.

A reconnoissance of the country on the western slope, between the head waters of South Boulder creek and the south fork of the Grand, together with barometrical observations, made it apparent that the running of a contour or grade line from the crest of the Hogback, at the head of South Boulder creek, or from any practicable point below the crest, would be attended with great difficulty, and an expense out of all proportion to that contemplated by the act.

Ridges and cañons, faced with precipitous ledges, alternate in rapid succession over much of the line north, and all attempts to avoid them, by dropping to lower contours, resulted in meeting new obstacles equally as formidable.

The engineer in charge was therefore instructed to make careful examinations of the highest sources of water supply, in the various branches of the Grand, from Grand lake south to the South Boulder Pass, tak-

ing gaugings of all streams having a reasonable supply, and to connect the same by transit and level lines, making such topographical observations as would be desirable for future estimates; also, to make connection with all low passes of the range, that might possibly be utilized for diversion.

About two months' time were occupied with this work, with two corps of engineers, embracing some twelve men, and while the cold and stormy weather on the range in the late fall, rendered it impracticable to continue the work and reach determinate results on all points desired, sufficient data was obtained to warrant the following conclusions:

*First*—That a satisfactory water supply cannot be obtained within the area traversed, above an elevation of about 9,500 to 10,000 feet, Ranch creek and the south fork of the Grand, with its tributaries, being the principal sources of supply.

*Second*—That the lowest available depressions in the crest of the range, through which water could be diverted, are not less than 11,500 feet in elevation.

*Third*—That an extended line of canal along the range, at the highest elevation of water supply, would be impracticable in construction on account of the baken and rocky nature of the ground, and the consequent great expense involving miles of fluming along precipitous ledges and over rock-slides, and would further be impracticable in maintenance, on account of snow, earth and rock-slides, and the wash from heavy storms; and,

*Fourth*—That should such a canal be constructed, not less than three miles of tunnel would be required through the range for the purpose of diversion.

It is, perhaps, well here to observe that the conditions for a range water supply, which prevail on the



eastern slope, do not exist on the western, in this, that the prevailing winds on the range are from the west, carrying the snow of the summit, from the western drainage into banks on the eastern slope, and from these banks much of our June and July water supply is derived.

Inasmuch as such banks are not formed to any extent on the western slope, and the Pacific winds evaporate and carry away much of the snow-fall, where not protected by heavy bodies of timber, it can readily be seen that but a very limited quantity of water can be obtained above timber line, at a season of the year when it would be practicable to conduct it in ditches and divert it over the range. These remarks apply, more particularly, to that portion of the range under consideration, over the entire extent of which the crest is uniformly high and above timber line.

In the dense bodies of timber well down on the Park slope, considerable depths of snow are held by the protecting shades of the forests until May and June, but at too low an elevation to render diversion practicable.

For the reasons above given, I have not deemed it advisable to incur further expense in surveys, nor to begin the construction of works, the cost of whose ultimate completion—if made available for the purposes desired—would far exceed the appropriation provided therefor.

## STATEMENT OF EXPENSE.

Appropriation . . . . .	.....	\$ 25,000 00
Pay-roll of engineers and assistants . . . . .	\$ 931 50	
Supply teams and pack animals . . . . .	299 45	
Supplies . . . . .	200 73	
Work on maps and profiles . . . . .	125 00	
		1,556 68
Balance unexpended . . . . .	.....	\$ 23,443 32

**DIVERSION OF WATERS AND DIVERSION OF  
WATERS EXPENSE.**

Senate Bill No. 248 provides for a survey of the sources of the Grand, Laramie and North Platte river systems, at or near The Continental Divide, to determine whether the unappropriated waters thereof can be made to flow eastward into and through the South Platte and Arkansas river systems, and appropriates \$3,000 for said survey.

If from the surveys made such diversion is determined to be feasible and practicable, the further sum of \$10,000 is appropriated for the construction of the necessary ditches or dams.

The Governor, Attorney-General and State Engineer are constituted a Commission for the purpose of carrying out the provisions of this act.

Pending the prosecution of the surveys provided for in House Bill No. 161, heretofore referred to, no action was taken in the matter of sending out an engineering force under the provisions of this act. Investigation and inquiry, however, as to the most available points for diversion developed the fact that individual enterprise had already appropriated the most eligible sites, viz: The Berthoud Pass, and the low passes, at the head waters of the Laramie and Grand. It further became apparent that the appropriation of \$10,000 was entirely inadequate for the construction of such works as would be of any material benefit to irrigation on the eastern slope, for the reason that at such an elevation, as would make diversion practicable, the streams are all small, requiring an extended line of canal and the tapping of many of these streams to secure the desired flow; also requiring tunnels through the range, that would cost, in a single case, several times the amount appropriated.

As an illustration of this, we will take the Berthoud

Pass, which has been selected by G. H. Church, as the point for diversion, in a project of a similar kind. This is probably the most favorable site for the purpose, within the scope of the act.

The pass is below timber line, being at an elevation of 11,350 feet, and, at this point, the Continental Divide makes a sharp deflection to the west. The Vasquez range puts out from the main range, just west of the Pass, extending in a northerly direction, to Hot Sulphur Springs. The contemplated canal bearing westerly from the Pass, will get its supply from the eastern slope of the latter range, thus receiving the benefit of the snow drifts on that slope, and acquiring a fair supply of water, at a higher elevation than practicable at any other point on the western slope. Still, under the circumstances, as I am advised by Mr. E. L. Rogers, the Engineer in charge, it will require some ten miles of ditch and flume line, intercepting many small streams, to secure a flow of from 6,000 to 10,000 inches at high water time, in June and July. The canal will be at an elevation of about 11,000 feet, and a tunnel under the Berthoud Pass, about 3,000 feet in length will be required for the purpose of the diversion. The entire project will cost from \$200,000 to \$250,000.

The appropriation for survey and construction, \$13,000, therefore remains intact.

---

#### MONTROSE COUNTY BRIDGE.

House bill No. 273 provides for the construction of a State bridge, of iron, across the Gunnison river, in Montrose county, at a point known as the Red Cañon, and appropriates \$15,000 therefor.

Upon inquiry at Montrose, and on consultation with the chairman of the Board of County Commissioners of Montrose county, it was ascertained that the site designated by the act was in a precipitous part of the cañon,

without any means of access, that a passable road to the site would cost many thousands of dollars—estimated as high as fifty thousand—and that no provision had been made for its construction, nor was there likely to be any action taken in the matter, the project being regarded as impracticable.

Under the circumstances, it was not deemed advisable, by the Commission, to order a survey, or incur any expense in the matter.

The appropriation of \$15,000, therefore, remains intact.

---

#### COAL CREEK RESERVOIR.

---

Senate Bill No. 313 provides for the construction of a reservoir at the head of Coal creek, in Arapahoe county, and appropriates \$20,000 therefor.

The Governor, Attorney-General and the State Engineer are constituted a board for the purpose of construction, and it is made the duty of the State Engineer to "make the necessary arrangements for measuring the flow of water in said Coal creek, with a view of constructing a reservoir of sufficient capacity to hold the waters that may result from storms in that portion of the State drained by said Coal creek, and thereafter to calculate and determine the required capacity of a reservoir to store the waters flowing in said creek."

Pursuant to the provisions of the Act, a gauging station was established, and the result of the measurements and examination is herein below given in my report to the Board of Construction.

#### REPORT.

DENVER, COLO., Nov. 15, 1890.

*To the* BOARD OF CONSTRUCTION

OF THE COAL CREEK RESERVOIR:

GENTLEMEN:—In compliance with section 2 of an Act of the Seventh General Assembly, "To provide



for the construction of a reservoir at the head of Coal creek, upon or adjacent to sections 20, 28 and 34, township 4 south, range 65 west, in the county of Arapahoe, to store the water of floods, and appropriating \$20,000 therefor."

I have to report that during the month of August, 1889, a gauging station was established on said creek, near the south line of said section 34, for the purpose of measuring the flow of the stream during the pendency of floods, and that a limited amount of information has been obtained in the matters required by the Act; and further, that I have made an examination of said sections 20, 28 and 34, with reference to the most available site for a reservoir, and as to the feasibility of such construction.

As a result of such examination, and from information obtained through residents on the line of the stream, the following points have been determined and conclusions arrived at:

*First*—That the most available site for the location of a dam within the limits prescribed, would be on section 34, in the north-west quarter of the north-west quarter of said section.

That the extreme length of said dam would be about 1,400 feet and the greatest depth 41 feet, that the same would require for embankment 120,625 cubic yards of dirt and would cost approximately \$30,000, the cost depending upon depth for foundation. The reservoir would have an estimated capacity for 44,000,000 cubic feet of water.

*Second*—That owing to the vast quantities of sand carried down the stream during flood storms, any area which could be provided for the storage of water, would in a limited period of time be filled with sand and the structure thus rendered useless, and

*Third*—That an area covering about 120 acres of land would be required for the reservoir site and dam, said land extending diagonally through said section 34; that said land together with about 2,500 acres lying adjacent thereto, is owned by Adolph Schirmer, and that said Schirmer refuses to part with the same unless purchase is made of his entire tract.

The construction of a dam across a stream like Coal creek, having a drainage area of over one hundred square miles and, subject to heavy local flood storms is, under favorable conditions, open to serious objection; but when it is considered that the bed of this channel is a light and shifting sand, which extends downward to indefinite depths, rendering a safe foundation to the dam very expensive and difficult to obtain; and further, that the banks on either side of the reservoir site are composed of the same material, admitting of excessive seepage, so much, in fact, that it is reported impracticable to carry water through ditches constructed in it, and when it is further considered that it would be impracticable to prevent the rapid accumulation of sand in the storage basin, and the consequent covering up of the discharge pipes and destruction of the basin, it becomes a reasonable certainty that the enterprise would not be feasible, and that such a construction would be an experiment not justifiable under the peculiar circumstances.

It would certainly be desirable for that section of country if a system of reservoirs could be established and successfully maintained on or in the vicinity of Coal creek, as, from the gaugings made, it has become evident that sufficient water from flood storms flows through the channel to fill a reservoir of the capacity heretofore mentioned, perhaps two or three times during the season, and private enterprise, unrestricted as to locality, may in time accomplish this end.

Mr. Schirmer informed me that some two or three years ago he had in contemplation the construction of such a reservoir on Coal creek, on or above his land, but for the reasons heretofore assigned as to sand deposits, had concluded the scheme impracticable.

In view of the reasons above given, I regard the work contemplated by the act as not practicable or feasible, that the cost of such a reservoir would exceed the limits of the appropriation, and the quantity of water stored would not be commensurate with the expense incurred.

The gauging station was established by my assistants in the office, and the expense attending this, and the examination made by myself being light, has been



taken from my assistant fund, leaving the appropriation intact.

Respectfully submitted,  
J. P. MAXWELL,  
*State Engineer.*

At a meeting of the Board, the report was considered and the conclusions therein set forth were endorsed, and it was determined to take no further action in the matter.

Appropriation (intact) . . . . . \$ 20,000

#### PURIFICATION OF CLEAR CREEK WATERS.

House Bill No. 193 provides a Commission for the purpose of making experiments and practicable tests in the matter of the purification of the waters of Clear creek, and appropriates therefor out of any money in the treasury, not otherwise appropriated, the sum of \$5,000.

Before any action was taken in this matter by the Commission, the following communication was received from the Auditor of State relative thereto:

DENVER, COLO., Sept. 5. 1889.  
HON. J. P. MAXWELL,  
*State Engineer.*

DEAR SIR:—There is a question as to whether or not the appropriations made by the Seventh General Assembly are entirely within the constitutional limit as provided in section 16, page 60, General Statutes of Colorado, 1883.

We made a statement of appropriations and an estimate of the probable income for the years 1889 and 1890, and presented them to the Governor, calling his attention to the facts, and requested that he ask the Supreme Court for a decision of the question.

I would suggest to you that it might be advisable to await the decision of the Supreme Court before commencing the work of experimenting on the purification of the waters of Clear creek.

Yours truly,

LOUIS B. SCHWANBECK,  
*Auditor of State.*

By HARRY TARBELL,  
*Deputy.*

Being subsequently advised by the Attorney General that, under the ruling of the Supreme Court, the appropriation would not be available, no steps have been taken toward carrying out the provisions of the act.

Appropriation (intact) . . . . . \$ 5,000

### BEAR RIVER ROAD.

House bill No. 134 provides for the construction of a State wagon road through the Bear river cañon, between Steamboat Springs and Hayden, in Routt county, and appropriates \$5,000 therefor.

The Commission consists of the Governor, State Engineer and chairman of the Board of County Commissioners of Routt county (S. H. Tharp).

About the first of July, 1889, I made a personal examination of the cañon, and a general location of the line. Preston King, civil engineer, was then employed to make the survey, maps and profiles.

September 25, a call was made for bids, under the plans and specifications, the latter providing for a ten-foot solid road-bed, with sixteen-foot turnouts not exceeding five hundred feet apart, and a substantial stone retaining wall on the lower side of the road. The road to be five miles and five hundred feet in length.

October 16, the following bids were received:

S. L. Smith, of Leadville . . . . .	\$ 4,060 00
Howard, Gaddis & Packer . . . . .	4,075 00

The award was made to S. L. Smith, as being the lowest responsible bidder; and S. H. Tharp, chairman of the Board of County Commissioners, was selected to superintend the construction.

At the lower end of the cañon, and near the terminus of the survey, the line crossed an irrigation canal, and followed the lower bank thereof for about five hundred feet.

In the construction at this point, objection was made by the owners of the canal, to building the road along said lower bank, and hence, by a subsequent agreement with the contractor, the road was to terminate at the crossing of the ditch, and sixty dollars was to be deducted from the contract price.

Notice having been received from the Superintendent that the road would be completed by the last of December, 1889, I then arranged with the Superintendent to meet him on the ground about the first of January, 1890, for the purpose of inspection.

Arriving in Steamboat Springs on Monday, January 7, I was informed that the forces had been drawn off the road on the Saturday previous, and, on that same evening, the contractor started for Denver, carrying with him Mr. Tharp's certificate as to completion.

An inspection of the road, although made with difficulty, on account of the deep snow, developed very serious defects in construction, the road-bed being so narrow as to render travel over it, with teams, unsafe and impracticable, the retaining walls insecure, and the bridges flimsy and without proper foundations.

Proceeding immediately to Denver, I found that the contractor had attempted to effect a settlement and payment, on the strength of Mr. Tharp's certificate. Upon the advice of the Attorney-General, however, the Auditor refused to draw the warrant, because the papers presented by the contractor did not constitute a certificate of *completion of the road*, as required by the act.

The contractor then brought a *mandamus* suit against the Auditor, in the District Court of Arapahoe County, Judge Allen presiding, to compel the issuance of the warrant. The *mandamus* was granted, whereupon the Attorney-General took the case, by writ of error, to the Supreme Court, where Allen's judgment was reversed and the case dismissed.

The contractor then instituted proceedings in the District Court of Lake County, to compel the Board to issue a certificate of completion, the contractor alleging the completion of the road, and the Board denying it, where the case is still pending.

In the meantime, the Board, after due notice to the contractor, declared the contract annulled, and proceeded to advertise for a re-letting of the work. Bids were received under this call, but it was finally concluded by the Board, not to make the award until trial was had in the case now pending.

The complications in this case have been unfortunate for the people of Routt county, as the road is much needed, the cañon being impassable during high water time; but the persistent efforts of the Board to secure completion have thus far been unavailing, on account of these legal proceedings and the uncertainties connected therewith.

## STATEMENT OF EXPENDITURES.

Appropriation . . . . .		\$ 5,000 00
Preston King, for survey and maps . . . . .	\$ 267 25	
Advertising . . . . .	54 75	
S. H. Tharp, service and team in survey . . . . .	117 00	
S. H. Tharp, trip to Denver to Board meeting. . . . .	84 60	
S. H. Tharp, superintendence of construction . . . . .	224 00	
State Engineer, expense three trips to Bear river. . . . .	106 35	
		853 95
Balance unexpended. . . . .		\$ 4,146 05

## GLENWOOD SPRINGS BRIDGE.

House Bill No. 50 provides for the construction of a State bridge across the Grand river at Glenwood Springs, and appropriates \$45,000 therefor.

The Governor, State Engineer and Chairman of the Board of County Commissioners of Garfield county are constituted a Board of Construction.



On the eleventh day of September, 1889, the Board met at Glenwood Springs, and made a definite location of the site. Theo. Rosenberg, civil engineer, was employed to make a careful survey of the ground, sink test pits, and submit maps and profiles for inspection of Board. A call was then made for plans, as provided by law, under which three plans were submitted, and that of J. W. Hoover, of Kansas City, adopted. Bids being then called for, ten were submitted, the lowest being that of the Bullen Bridge Company, for \$37,489.00, to whom the award was made. Subsequently this amount was increased to \$40,000.00, by agreement with the Board, in consideration for which the bridge company contracted to construct an additional 1,564 feet of iron railing between the roadway and sidewalks on the bridge, for the better security of pedestrians.

The plans call for a deck bridge, 863 feet long, including 110 feet of masonry approaches; the 753 feet of steel superstructure to consist of one 235-foot span, one 108-foot span, two 85-foot spans, one 60-foot span, and 265 feet of shorter spans having pedestal supports. The sub-structures to be of first-class masonry. The bridge is sufficiently elevated to give 21 feet head room over the Denver & Rio Grande railroad track. After the plans were adopted some complications arose, through a misunderstanding between interested parties in Glenwood and the railroad company, necessitating a modification of the plans and the raising of the floor of the bridge some six feet to satisfy the demands of said road.

The masonry was completed and the main span placed, several months ago, further work having been suspended from the want of the iron for the remaining spans. All the material is now on the ground, and the early completion of the entire structure assured.

NOTE.—Since making report to the Governor, the Glenwood Springs bridge has been completed and inspected, and was, on the nineteenth day of February 1891, accepted by the board of construction. Appended will be found a statement of expenditures connected therewith:

## STATE ENGINEER.

609

## STATEMENT.

Appropriation . . . . .		\$ 45,000 00
For preliminary work, profiles, surveys and superintendence . . . . .	\$ 1,656 20	
For advertising . . . . .	91 70	
For blue prints for bidders . . . . .	53 10	
For accepted plans by J. W. Hoover . . . . .	500 00	
For inspection of iron at shops . . . . .	329 85	
State Engineer, expense, three trips . . . . .	70 95	
Bullen Bridge Co., account contract . . . . .	40,000 00	
Bullen Bridge Co., extra masonry and painting . . . .	445 50	
		43,147 50
Balance unexpended . . . . .		\$ 1,852 50

## DELTA COUNTY BRIDGE.

Senate bill No. 73 provides for the construction of an iron bridge across the Gunnison river at some suitable point between the mouth of the Black Cañon and the mouth of the Uncompahgre river, in Delta county, and appropriates \$20,000 therefor.

The Governor, State Engineer and Chairman of the Board of County Commissioners, of Delta county (Aaron Clough) are constituted a commission for the purpose of locating and constructing said bridge.

In December of 1889 I made an examination of the ground, and with Mr. Aaron Clough located the site of the bridge at the mouth of Black Cañon, as being the safest in the foundation, the most economical in cross-section, and as the most generally satisfactory to the people to be accommodated.

Plans were called for as provided by law, and \$200 offered for the best and accepted plans.

Under the call for bids, seven were received, the lowest of which being by the Bullen Bridge Co., for \$17,289,



the award was made to said company and contract entered into.

The plans call for a two span bridge, 196 and 180 feet respectively, with a 16-foot clear roadway, the abutments and pier to be first-class masonry. The latter are now completed, and the material for the super-structure reported on the ground or in transit. I am informed by the contractor that work will be resumed at an early date, and the bridge completed for acceptance in the following January.

NOTE—This bridge has been completed and accepted since report thereon was made to the Governor, and appended will be found a statement of expenditures.

#### STATEMENT OF EXPENDITURES.

Appropriation. . . . .		\$ 20,000 00
Theo. Rosenberg surveys, maps and profiles. . . . .	\$ 125 80	
36 blue prints of profiles and plans. . . . .	40 35	
Ada Dwelle, 12 copies specifications . . . . .	8 40	
Advertising for plans and bids . . . . .	115 00	
W. R. Hand, for adopted plans . . . . .	200 00	
State Engineer and deputy, expense of three trips to site	92 75	
H. C. Jennings, account Superintendent and inspection of iron at shop. . . . .	864 45	
The Bullin Bridge Co., contract. . . . .	17,289 00	
		18,735 75
Balance unexpended . . . . .		\$ 1,264 25

#### BEAR RIVER BRIDGE.

House bill No. 58 provides for the construction of a State bridge across Bear river, in Routt county, at some point between Juniper and Cross mountains, appropriates \$7,000 therefor, and designates the Governor, State Engineer and Chairman of the Board of County Commissioners of Routt county as the locating and building board.

In January, 1890, I made an examination of the ground, and selected the Thornburg crossing of the Bear as the most available for economical construction and as affording the greatest accommodation to the traveling public.

After the adoption of suitable plans, bids were called for, of which six were received.

The award was made to the Bullen Bridge Co., as being the lowest bidder, for \$6,389. The bridge is to be a combination truss, with two spans, of one hundred and twelve feet each, and fourteen feet roadway—the wooden truss members to be of Oregon pine, and the sub-structure to be of masonry. This bridge is over one hundred miles from any railroad, and the shipments of material have therefore, been attended with considerable expense, as well as delay, but all material is reported now on the ground, and the bridge well under construction.

## STATEMENT OF EXPENDITURES.

Appropriation . . . . .		\$ 7,000 00
State Engineer, expense locating site. . . . .	\$ 58 70	
Copies, blue prints and specifications . . . . .	9 86	
Advertising for plans and bids . . . . .	82 80	
J. C. Kennedy, for surveys and superintendence . . . .	142 00	
		293 36
Balance unexpended . . . . .		\$ 6,706 64

(Contract not completed.)

## APPROPRIATIONS FOR INTERNAL IMPROVEMENTS, AND UNEXPENDED BALANCES.

IMPROVEMENT	Appropriated	Unexpended
Bennett creek and Conejos wagon road . . . . .	\$ 7,500 00	\$ 336 04
Trinidad and Stonewall wagon road . . . . .	15,000 00	33 70
Ten Mile river bridge. . . . .	2,000 00	241 15
Grand river bridge . . . . .	6,000 00	82 10
Clear Creek county road . . . . .	5,000 00	4,524 10
Grand river road and bridge . . . . .	10,000 00	9,412 82
Del Norte levee . . . . .	2,000 00	871 78
South Boulder creek diversion . . . . .	25,000 00	23,443 32
Del Norte bridge . . . . .	7,000 00	1,441 06
Diversion of waters, Grand and Laramie. . . . .	13,000 00	13,000 00
Coal creek reservoir. . . . .	20,000 00	20,000 00
Clear creek purification. . . . .	5,000 00	5,000 00
Bear river road . . . . .	5,000 00	. . . . .
Greenwood Springs bridge. . . . .	45,000 00	1,852 50
Delta county bridge. . . . .	20,000 00	1,264 25
Montrose county bridge . . . . .	15,000 00	15,000 00
Bear river bridge . . . . .	7,000 00	. . . . .
Totals . . . . .	\$209,500 00	\$ 96,502 82

From the above recapitulation it will be seen that \$209,500 were appropriated for internal improvements, and that of this amount the sum of \$96,502.82 is returned unexpended. As the Bear river road and Bear river bridges are not yet completed, the balances in these cases are estimates.

In the construction of the State roads and bridges, it has been the aim of the various Boards, to secure the best possible results within the limits of the appropriations. In the bids for the bridges, competition was sharp, resulting in very favorable figures to the State, for a good class of bridges.

All sub-structures are masonry, and suitable for iron super-structures should they ever be required, where not already provided for. In the combination bridges, all

truss members of wood can be replaced by iron at any time in the future. All iron and steel have been carefully inspected and tested, at the shops, in Chicago, by experts in the line, and a close supervision of construction has been provided in all cases.

There have been vexatious delays, in connection with the construction of the bridges, occasioned by high water, and for other causes, but, in no case has travel been seriously discommoded; and it has not been deemed advisable, in the interest of the State, to take summary measures for the enforcement of contracts where the limit as to time has been exceeded, believing that the best interests of the State would be subserved in securing, if possible, the completion of all bridges under the present favorable contracts.

The most important of the enterprises undertaken for the State, during the past two years, is the

#### STATE CANAL NO. I.

The act of the Seventh General Assembly, known as S. B. No. 263, approved April 19, 1889, authorized the construction of one or more irrigating canals from the Arkansas river, under the control of the Board of Penitentiary Commissioners acting as a Board of Construction.

Under the provisions of the act, and at the request of the Commissioners, an examination was made by myself June, 1889, and the head of the canal established on the south bank of the river, in the Grand Cañon, about three miles above the mouth of the latter.

Surveys were then begun under the direction of John S. Titcomb, the Deputy State Engineer. The first, or trial line was run on a grade of 6.34 feet per mile to the east side of the "Prison Hogback," at Cañon City, and thence on a grade of 1.76 feet per mile. This line was run to a point twenty-five miles from the head.



On further consideration the Deputy decided to change the grade, and accordingly, after raising the grade at the head two feet, ran another line on a grade of 5.28 feet per mile from the head to the mouth of the cañon, and thence on a grade of 1.76 feet per mile. This made a difference of fourteen feet in the elevation (higher) of the line from about the mouth of the cañon, putting the line on better ground generally, covering more land and shortening the line considerably, cutting off about one and three-quarter miles at one place over the trial line. This second line was run out about thirty miles and the survey stopped for awhile. Later, in August and September, 1889, the preliminary location was carried on to intersect the Fountain qui Bouille, by Mr. Thomas W. Titcomb. Under the latter, a preliminary line was also run from the head along the south side of the river, about one and one-half miles, to where it crosses to the north side, and this line was continued, being the second within and the third outside of the cañon, to the open park north-east of Cañon City.

Proper maps and statements of water rights were prepared, duly executed and filed with the recorder of Fremont county and in this office.

Later, and early in 1890, the line of the tunnel through the "Prison Hogback" at Cañon City was definitely fixed, and at the date of this report very satisfactory progress has been made in driving said tunnel, as well as in grading the approaches to the same at each end.

According to the data furnished by the State Land Department, the canal will cover some 27,000 acres of State land.

---

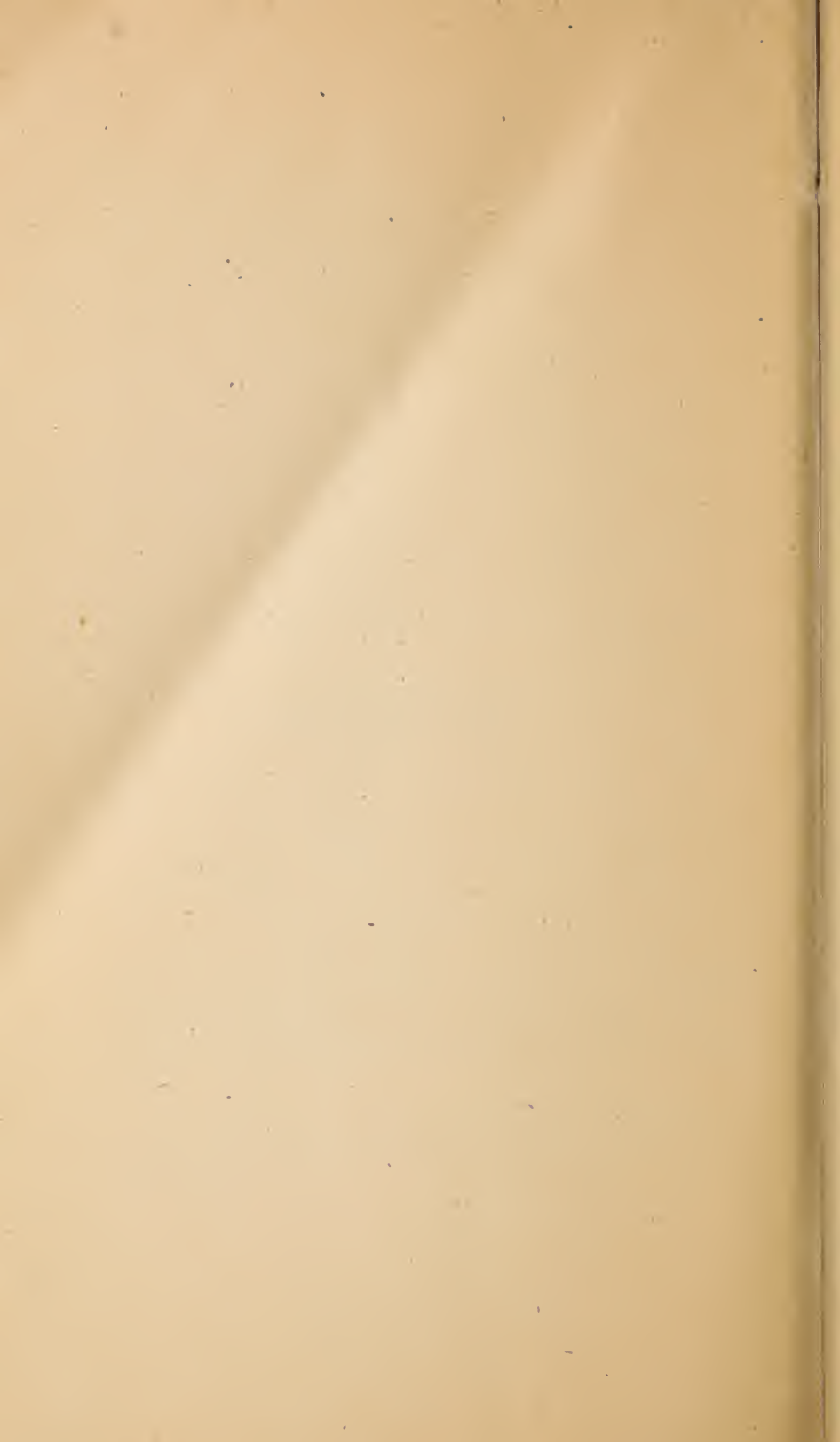
---

# INDEX.

---

---





# INDEX.

## PART I.

	PAGE
Title . . . . .	I
Letter of Transmittal. . . . .	III

### INTRODUCTION.

Act of Seventh General Assembly restricting number of pages in report . . .	5
Report of ex-State Engineer, J. S. Greene . . . . .	..
Demand for and distribution of same . . . . .	..

### CHAPTER I.

History of operations of State Engineer Department, for the years 1889-90 . .	6
Letter of instructions to Water Commissioners, issued April, 1889 . . . . .	..
Act giving police powers to Water Commissioners, fixing their salaries, defining their duties, etc. . . . .	7
Act providing for the erection of head-gates, waste-gates, etc. . . . .	9
Act imposing penalty for bribing persons in charge of distribution of water .	10
Letter of instructions to Water Commissioners <i>in re</i> ditches having no decrees	11
Lack of head-gates and rating flumes . . . . .	13

### COUNTY BOUNDARIES.

Line between Garfield and Mesa and Pitkin counties . . . . .	14
Surveyed by Frank P. Monroe . . . . .	..
Extract from his report . . . . .	..

### RESERVOIRS.

Duties imposed upon State Engineer in regard to . . . . .	15
Number of filings for same in State Engineer's office, 1887-90 . . . . .	..
Denver Water Storage Company's reservoir . . . . .	16
Acreage irrigated from reservoirs . . . . .	17

### GAUGING STATIONS.

No. 1, on Cache la Poudre river . . . . .	17
No. 3, on South Platte river . . . . .	19
No. 4, on Clear creek . . . . .	18
No. 5, on St. Vrain river' . . . . .	18
No. 6, on Bear creek, Jefferson county . . . . .	19
No. 7, on Boulder creek . . . . .	18
No. 8, on Big Thompson creek . . . . .	18
No. 1, (Division 5) Uncompahgre river . . . . .	19

### TABLES OF DISCHARGE in cubic feet per second of:

Cache la Poudre river, G. S. No. 1, 1889 . . . . .	22
Cache la Poudre river, 1890 . . . . .	23
South Platte river, G. S. No. 3, 1889 . . . . .	24
South Platte river, 1890 . . . . .	25

South Platte river, G. S. No. 3B, 1889 (foot of Twenty-second street, Denver)	26
South Platte river, 1890 . . . . .	27
St. Vrain creek, G. S. No. 5, 1889 . . . . .	28
St. Vrain creek, 1890 . . . . .	29
Bear creek, (Jefferson co.) G. S. No. 6, 1889 . . . . .	30
Bear creek, 1890 . . . . .	31
Boulder creek, G. S. No. 7, 1889 . . . . .	32
Boulder creek, 1890 . . . . .	33
Big Thompson creek, G. S. No. 8, 1889 . . . . .	34
Big Thompson creek, 1890 . . . . .	35
South Boulder creek, G. S. No. 9, 1889 . . . . .	36
South Boulder creek, 1890 . . . . .	37
Arkansas river, at Cañon City, 1889 . . . . .	38
Arkansas river, 1890 . . . . .	39
Rio Grande river, at Del Norte, 1890 . . . . .	40
Uncompahgre river, 1890 . . . . .	41
Mean discharge of the above, except the Uncompahgre . . . . .	42

## ARTESIAN WELLS.

General report on . . . . .	42
-----------------------------	----

## MOUNTAIN FORESTS.

Effect of destruction of, on water supply for irrigation . . . . .	43
--	----

## DUTY OF WATER.

In irrigating, general remarks . . . . .	46
In Water District No. 3, Cache la Poudre . . . . .	48
In Water District No. 4, Big Thompson . . . . .	49
In Water District No. 5, St. Vrain . . . . .	49
In Water District No. 6, Boulder and South Boulder . . . . .	50
In Water District No. 9, Bear creek . . . . .	50
Tabulated statement of above . . . . .	50

## INJUNCTION PROCEEDINGS.

Colorado Agricultural Ditch and the Clear Creek and Platte River Ditch, case of	52
Farmers High Line Ditch (Clear creek) case of . . . . .	54
As affecting action of Water Commissioner of District No. 23 . . . . .	55-58
Agricultural Ditch <i>vs.</i> State Engineer <i>et al</i> (domestic use, etc.) . . . . .	60
Mary Ann Edwards <i>vs.</i> State Engineer <i>et al</i> (application for decree) . . . . .	60
Ricolo Chicrickique <i>vs.</i> State Engineer <i>et al</i> (application for decree) . . . . .	61
Farmers Independent Ditch Co. <i>vs.</i> Agricultural Ditch <i>et al</i> . . . . .	61

## DOMESTIC USE.

General remarks . . . . .	61
---------------------------	----

## CHAPTER II.

## WATER DIVISION No. 1.

Report of I. H. Batchellor, Superintendent of Irrigation . . . . .	63
--	----

## WATER DISTRICT No. 1—

Report of the Water Commissioner . . . . .	64
Statement concerning ditches, by the Water Commissioner . . . . .	65
concerning artesian wells, Denver artesian basin . . . . .	66
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	71
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	74

WATER DISTRICT No. 2—

Report of Water Commissioner . . . . .	75
Statement concerning ditches, by the Water Commissioner . . . . .	76
concerning artesian wells in this district, not heretofore published . . . . .	78
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	84
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	86

WATER DISTRICT No. 3—

Report of Water Commissioner . . . . .	87
Statement concerning ditches, by the Water Commissioner . . . . .	88
concerning artesian wells in this district, not heretofore published . . . . .	92
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	93
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	95

WATER DISTRICT No. 4—

Report of the Water Commissioner . . . . .	96
Statement concerning ditches, by the Water Commissioner . . . . .	97
concerning artesian wells . . . . .	98
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	99
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	100
concerning existing reservoirs, by Commissioner . . . . .	101

WATER DISTRICT No. 5—

Report of the Water Commissioner . . . . .	102
Statement concerning ditches, by the Water Commissioner . . . . .	104
concerning artesian wells . . . . .	108
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	109
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	110
concerning existing reservoirs, by Commissioner . . . . .	111
concerning reservoir sites . . . . .	112

WATER DISTRICT No. 6—

Report of Water Commissioner . . . . .	113
Statement concerning ditches, by the Commissioner . . . . .	114
concerning artesian wells . . . . .	118
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	119
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	120

## WATER DISTRICT No. 7—

Report of Water Commissioner . . . . .	122
Statement concerning ditches, by the Commissioner . . . . .	123
concerning artesian wells . . . . .	127
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	128
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	129
concerning existing reservoirs, by Commissioner . . . . .	134
concerning reservoir sites . . . . .	140

## WATER DISTRICT No. 8—

Report of Water Commissioner . . . . .	141
Statement concerning ditches, by the Commissioner . . . . .	142
concerning artesian wells in this district, not heretofore published . . . . .	150
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	155
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	157
concerning existing reservoirs . . . . .	159
concerning reservoir sites . . . . .	160

## WATER DISTRICT No. 9—

Report of Water Commissioner . . . . .	161
Statement concerning ditches, by the Commissioner . . . . .	162
concerning reservoirs, by the Commissioner . . . . .	163
concerning artesian wells . . . . .	165
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	166
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	167

## WATER DISTRICT No. 23—

Report of Water Commissioner . . . . .	169
Statement concerning ditches, by the Commissioner . . . . .	170
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	182
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	184
concerning ditches for which decrees have been issued . . . . .	185

## WATER DISTRICT No. 46—

Water Commissioner . . . . .	198
Statement concerning ditches, relative to which plats and statements were filed as "miscellaneous," etc., in 1887-88 . . . . .	199
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	201
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	205



WATER DISTRICT No. 47—

Water Commissioner . . . . .	206
Statement concerning ditches, relative to which plats and statements were filed as "miscellaneous," etc., in 1887-88 . . . . .	207
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	210

WATER DISTRICT No. 48—

Description of, etc . . . . .	216
-------------------------------	-----

WATER DISTRICT No. 64—

Report of Water Commissioner . . . . .	216
Statement concerning ditches, by the Commissioner . . . . .	217
concerning artesian wells . . . . .	218
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	219

WATER DISTRICT No. 65—

Description of, etc . . . . .	220
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	221

CHAPTER III.

WATER DIVISION No. 2.

ARKANSAS DIVISION.

Report of John W. McDaniel, Superintendent of Irrigation . . . . .	222
--	-----

WATER DISTRICT No. 10—

No report from Water Commissioner . . . . .	225
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	226
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	230
concerning existing reservoirs, by Commissioner . . . . .	232
concerning reservoir sites, by Commissioner . . . . .	235
concerning artesian wells . . . . .	236

WATER DISTRICT No. 11—

Report of Water Commissioner . . . . .	237
Statement concerning ditches, by Water Commissioner . . . . .	238
concerning ditches for which decrees have been issued . . . . .	248
concerning reservoirs, for which decrees have been issued . . . . .	259
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	260
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	262



## WATER DISTRICT No. 12—

Report of Water Commissioner. . . . .	263
Statement concerning ditches, by the Water Commissioner . . . . .	264
concerning ditches, for which decrees have been issued . . . . .	267
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	278
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	280
concerning artesian wells. . . . .	281

## WATER DISTRICT No. 13—

No report from Water Commissioner. . . . .	282
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	283

## WATER DISTRICT No. 14—

No report from Water Commissioner. . . . .	285
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	286
concerning reservoirs, relative to which plats and statements have been filed, 1889-90. . . . .	288
concerning artesian wells. . . . .	291

## WATER DISTRICT No. 15—

Report of Water Commissioner. . . . .	292
Statement concerning ditches, by the Water Commissioner . . . . .	293
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	297
concerning reservoir sites, unimproved. . . . .	298

## WATER DISTRICT No. 16—

No report from Water Commissioner. . . . .	299
Statement concerning ditches, for which decrees have been issued . .	300
concerning reservoirs, for which decrees have been issued. . .	311
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	312
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	313

## WATER DISTRICT No. 17—

Report of Water Commissioner. . . . .	314
Statement concerning ditches, by the Water Commissioner . . . . .	315
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	317
concerning existing reservoirs, by Commissioner . . . . .	318

## WATER DISTRICT No. 18—

No Water Commissioner appointed. . . . .	316
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90. . . . .	319

## WATER DISTRICT No. 19—

No report by the Water Commissioner . . . . .	316
Statement concerning ditches, for which decrees have been issued . .	320
concerning ditches, relative to which plats and statements	
have been filed, 1889-90 . . . . .	322
concerning reservoirs, relative to which plats and statements	
have been filed, 1889-90 . . . . .	324

## WATER DISTRICT No. 49—

No Water Commissioner appointed . . . . .	316
Statement concerning ditches, relative to which plats and statements	
have been filed, 1889-90 . . . . .	325

## WATER DISTRICT No. 66—

No Water Commissioner appointed . . . . .	316
Statement concerning ditches, relative to which plats and statements	
have been filed . . . . .	326

## WATER DISTRICT No. 67—

No Water Commissioner appointed . . . . .	316
Statement concerning ditches, relative to which plats and statements	
have been filed, 1889-90 . . . . .	327
concerning reservoirs, relative to which plats and statements	
have been filed, 1889-90 . . . . .	329

## CHAPTER IV.

## RIO GRANDE DIVISION No. 2.

No report from the Superintendent of Irrigation . . . . .	330
---	-----

## WATER DISTRICT No. 20—

No report from the Water Commissioner . . . . .	330
Statement concerning ditches, relative to which plats and statements	
have been filed, 1889-90 . . . . .	331
concerning reservoirs, relative to which plats and statements	
have been filed, 1889-90 . . . . .	335
concerning artesian wells . . . . .	336

## WATER DISTRICT No. 21—

No report from the Water Commissioner . . . . .	344
Statement concerning ditches, by the Water Commissioner . . . . .	340
concerning ditches, relative to which plats and statements	
have been filed, 1889-90 . . . . .	337
concerning artesian wells . . . . .	338

## WATER DISTRICT No. 22—

Report of Water Commissioner . . . . .	344
Statement concerning ditches, by the Water Commissioner . . . . .	345
concerning ditches, relative to which plats and statements	
have been filed, 1889-90 . . . . .	349
concerning reservoirs, relative to which plats and statements	
have been filed, 1889-90 . . . . .	351

## WATER DISTRICT No. 24—

No Water Commissioner appointed . . . . .	352
---	-----

## WATER DISTRICT No. 25—

Report of Water Commissioner . . . . .	352
Statement concerning ditches, by the Water Commissioner . . . . .	353
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	366
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	370

## WATER DISTRICT No. 26—

No report from the Water Commissioner . . . . .	371
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	372

## WATER DISTRICT No. 27—

No report from the Water Commissioner . . . . .	374
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	375
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	376

## WATER DISTRICT No. 35—

Has no Water Commissioner . . . . .	377
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	378
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	379

## CHAPTER V.

## SAN JUAN DIVISION No. 4.

Superintendent of Irrigation, no report from . . . . .	380
No report from any Water Commissioner in division . . . . .	380

## WATER DISTRICT No. 29—

Description of . . . . .	380
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	381

## WATER DISTRICT No. 30—

Description of . . . . .	382
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	383

## WATER DISTRICT No. 31—

Description of . . . . .	384
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	385

WATER DISTRICT No. 32—

Description of . . . . .	386
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	387

WATER DISTRICT No. 33—

Description of . . . . .	388
Statement concerning ditches, relative to which plats and statements have been filed; 1889-90 . . . . .	389

WATER DISTRICT No. 34—

Description of . . . . .	390
--------------------------	-----

CHAPTER VI.

WATER DIVISION No. 5.

Report of E. B. Sawyer, Superintendent of Irrigation . . . . .	391
--	-----

WATER DISTRICT No. 28—

No Water Commissioner appointed . . . . .	391
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	392

WATER DISTRICT No. 36—

No Commissioner, no filings in 1889-90 . . . . .	391
--	-----

WATER DISTRICT No. 37—

Report of Water Commissioher . . . . .	394
Statement concerning ditches, for which decrees have been issued . . concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	395 401
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	404

WATER DISTRICT No. 38—

Report of Water Commissioner . . . . .	405
Statement concerning ditches, by the Water Commissioner . . . . .	406
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	409
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	412
concerning ditches, for which decrees have been issued . . . . .	413
concerning reservoirs, for which decrees have been issued . . . . .	425

WATER DISTRICT No. 39—

Report of Water Commissioner . . . . .	426
Statement concerning ditches, by the Water Commissioner . . . . .	427
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	428
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	431
concerning ditches, for which decrees have been issued . . . . .	432
concerning reservoirs, for which decrees have been issued . . . . .	440

## WATER DISTRICT No. 40—

Report of Water Commissioner . . . . .	441
Statement concerning ditches, by the Water Commissioner . . . . .	442
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	447
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	448
concerning ditches, for which decrees have been issued . . . .	450

## WATER DISTRICT No. 41—

Report of Water Commissioner, for 1889 . . . . .	455
Report of Water Commissioner, for 1890 . . . . .	456
Statement concerning ditches, by the Water Commissioner . . . . .	458
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	461
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	462
concerning ditches, for which decrees have been issued . . . .	463
concerning reservoirs, for which decrees have been issued . .	468

## WATER DISTRICT No. 42—

Report of Water Commissioner . . . . .	469
Statement concerning ditches, by the Water Commissioner . . . . .	470
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	475
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	477
concerning ditches, for which decrees have been issued . . . .	478

## WATER DISTRICT No. 45—

Report of Water Commissioner, for 1889 . . . . .	484
Report of Water Commissioner, for 1890 . . . . .	486
Statement concerning ditches, by the Water Commissioner . . . . .	487
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	492
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	493

## WATER DISTRICT No. 50—

No Water Commissioner appointed . . . . .	391
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	494

## WATER DISTRICT No. 51—

No Water Commissioner appointed . . . . .	391
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	495

## WATER DISTRICT No. 52—

No Water Commissioner appointed . . . . .	391
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	496



WATER DISTRICT No. 53—

No Water Commissioner appointed . . . . .	391
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	497
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	499

WATER DISTRICT No. 59—

No Water Commissioner appointed . . . . .	391
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	500

WATER DISTRICT No. 60—

Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	501
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	501

WATER DISTRICT No. 61—

Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	503
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	504

WATER DISTRICT No. 62—

Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	505
--	-----

WATER DISTRICT No. 63—

Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	506
--	-----

WATER DISTRICT No. 68—

Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	507
--	-----

CHAPTER VII.

WATER DIVISION No. 6.

No Superintendent appointed for this division . . . . .	508
---	-----

WATER DISTRICT No. 43—

Report of Water Commissioner . . . . .	508
Statement concerning ditches, by the Water Commissioner . . . . .	510
concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	516
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	518



## WATER DISTRICT No. 44—

Description . . . . .	515
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	519

## WATER DISTRICT No. 54—

Description . . . . .	515
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	521

## WATER DISTRICT No. 55—

No Commissioner appointed, no filing made, description . . . . .	515
--	-----

## WATER DISTRICT No. 56—

Description, no Commissioner appointed, no filing made . . . . .	515
--	-----

## WATER DISTRICT No. 57—

Description, no Commissioner appointed . . . . .	515
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	522
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	524

## WATER DISTRICT No. 58—

Description, no Commissioner appointed . . . . .	515
Statement concerning ditches, relative to which plats and statements have been filed, 1889-90 . . . . .	525
concerning reservoirs, relative to which plats and statements have been filed, 1889-90 . . . . .	530

## CHAPTER VIII.

Summation of crops raised . . . . .	531
Rainfall, etc., showing total precipitation at :	
Denver, Districts Nos. 2 and 8 . . . . .	534
Fort Collins, District No. 3 . . . . .	535
Greeley, District No. 3 . . . . .	536
Longmont, District No. 5 . . . . .	537
Georgetown, District No. 7 . . . . .	538
Idaho Springs, District No. 7 . . . . .	539
Castle Rock, District No. 8 . . . . .	540
Colorado Springs, District No. 10 . . . . .	541
Husted, District No. 10 . . . . .	542
Palmer Lake, District No. 10 . . . . .	543
Leadville, District No. 11 . . . . .	544
Cañon City, District No. 12 . . . . .	545
Pueblo, District No. 14 . . . . .	546
Las Animas, District No. 17 . . . . .	547
Rocky Ford, District No. 17 . . . . .	548
Monte Vista, District No. 20 . . . . .	549

Gunnison,	District No. 28 . . . . .	550
Fort Lewis,	District No. 33 . . . . .	551
Glenwood Springs,	District No. 38 . . . . .	552
Delta,	District No. 40 . . . . .	553
Montrose,	District No. 41 . . . . .	554
Cheyenne Wells,	District No. 49 . . . . .	555
Julesburg,	District No. 64 . . . . .	556
Lamar,	District No. 67 . . . . .	557
SEEPAGE WATER—		
Remarks on . . . . .		559
Tabulated statement of, on Cache la Poudre river, 1889 . . . . .		562
Tabulated statement of, on Cache la Poudre river, 1890 . . . . .		564
Tabulated statement of, on South Platte river, 1889 . . . . .		566
Tabulated statement of, on South Platte river, 1890 . . . . .		570
IRRIGATION STATISTICS—		
General remarks . . . . .		574
Tabulated statement, showing number and lengths of ditches, and areas of irrigated lands . . . . .		575
CHAMBERS LAKE—		
Tabulated statement, showing capacity thereof as reservoir . . . . .		576
EXPENDITURES—		
State Engineers' department . . . . .		577
RECOMMENDATIONS—		

## CHAPTER IX.

## STATE ROADS, BRIDGES AND OTHER IMPROVEMENTS.

Bennett creek and Conejos wagon road . . . . .	584
Trinidad and Stonewall wagon road . . . . .	585
Ten Mile river bridge . . . . .	587
Grand river bridge . . . . .	588
Clear Creek county, Road, Trail Run and Ute creek wagon road . . . . .	590
Grand river bridge and road (Hot Sulphur Springs) . . . . .	591
Del Norte levee . . . . .	593
Del Norte bridge . . . . .	594
South Boulder creek canal, for diversion of waters . . . . .	596
Diversion of waters and expense of . . . . .	599
Montrose county bridge . . . . .	600
Coal creek reservoir . . . . .	601
Purification of Clear creek waters . . . . .	604
Bear river road . . . . .	605
Glenwood Springs bridge . . . . .	607
Delty county bridge . . . . .	609
Bear river bridge . . . . .	610
The State Canal No. 1 . . . . .	614











